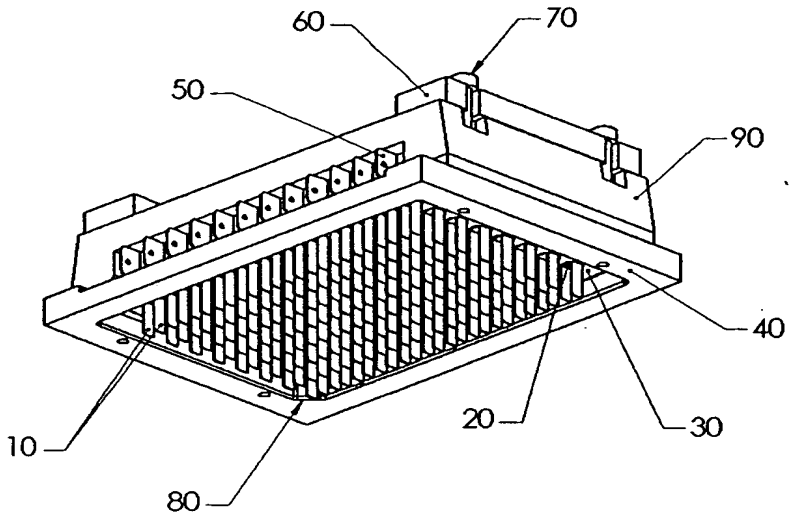


FIG. 1A

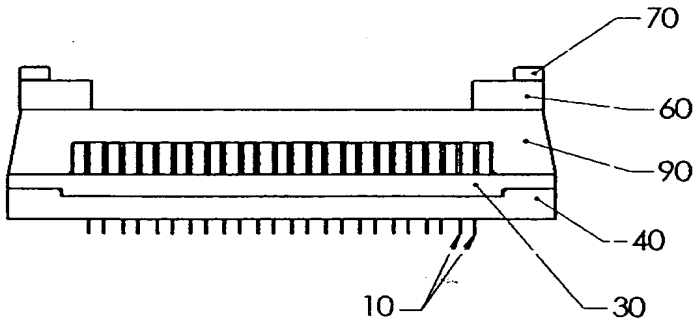


FIG. 1B

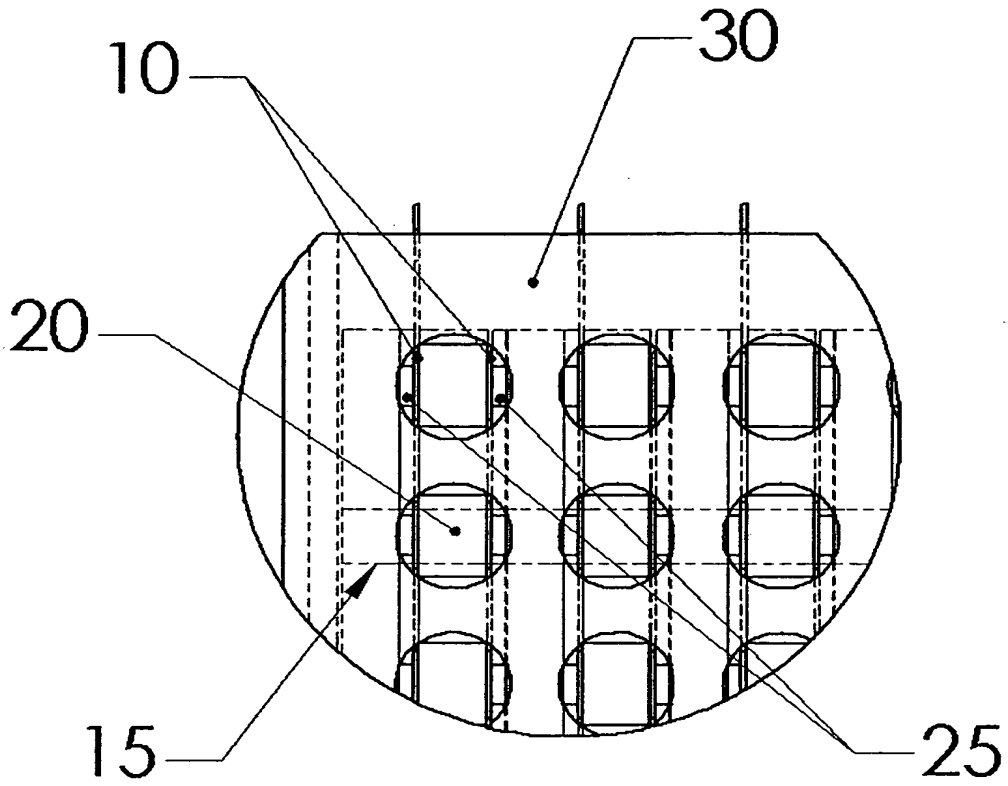


FIG. 1C

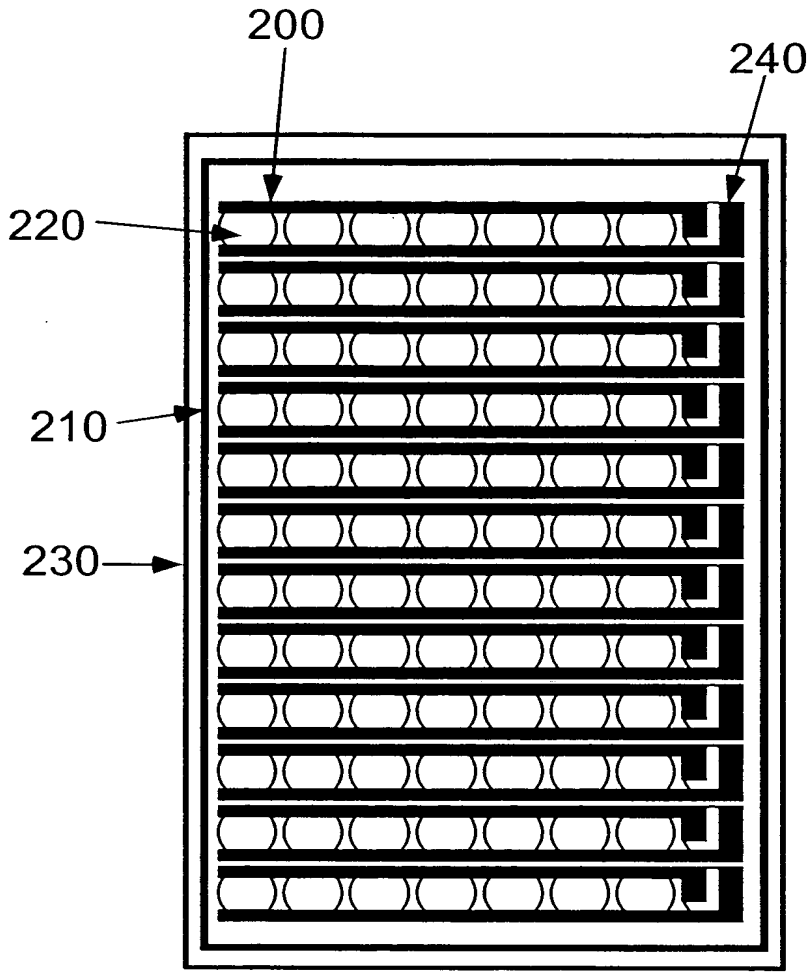


FIG. 2A

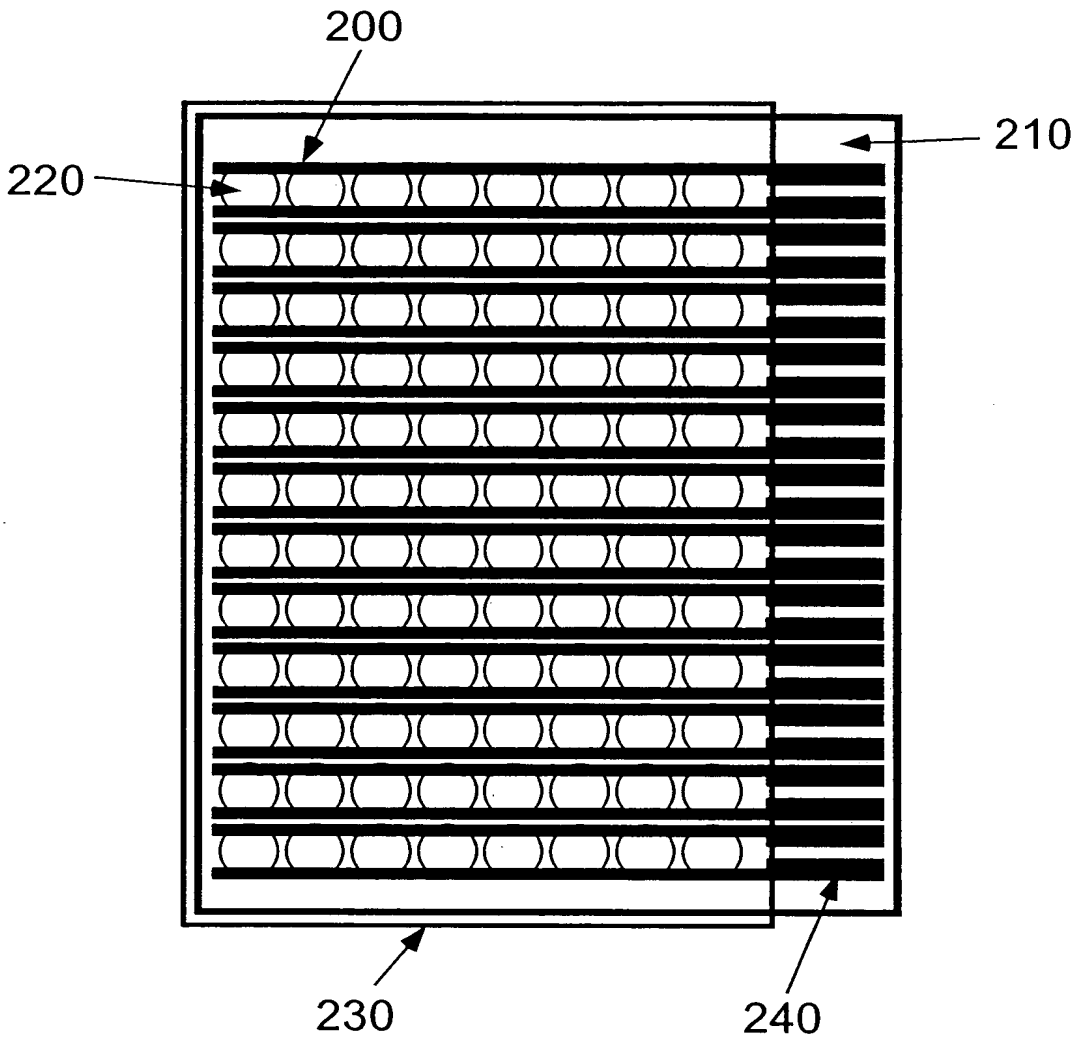


FIG. 2B

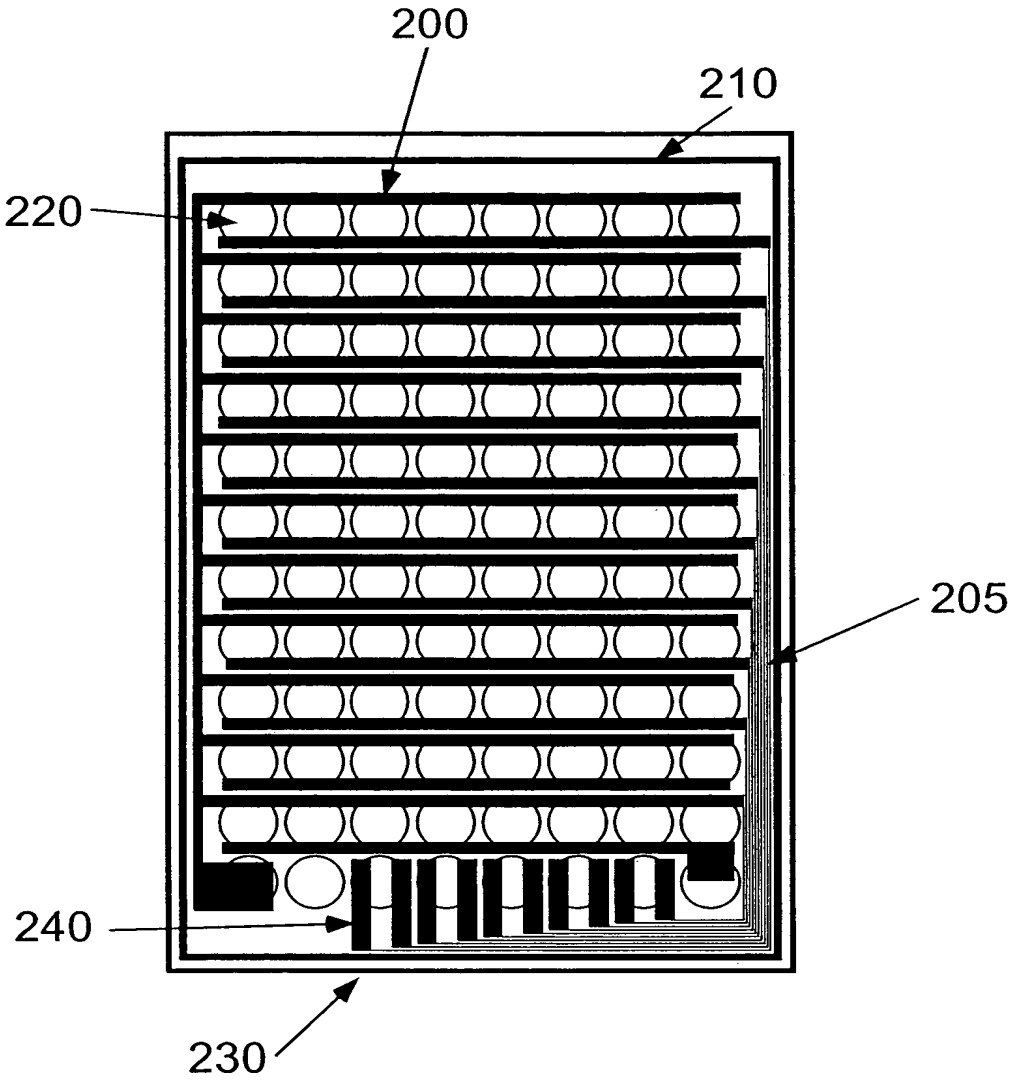


FIG. 2C

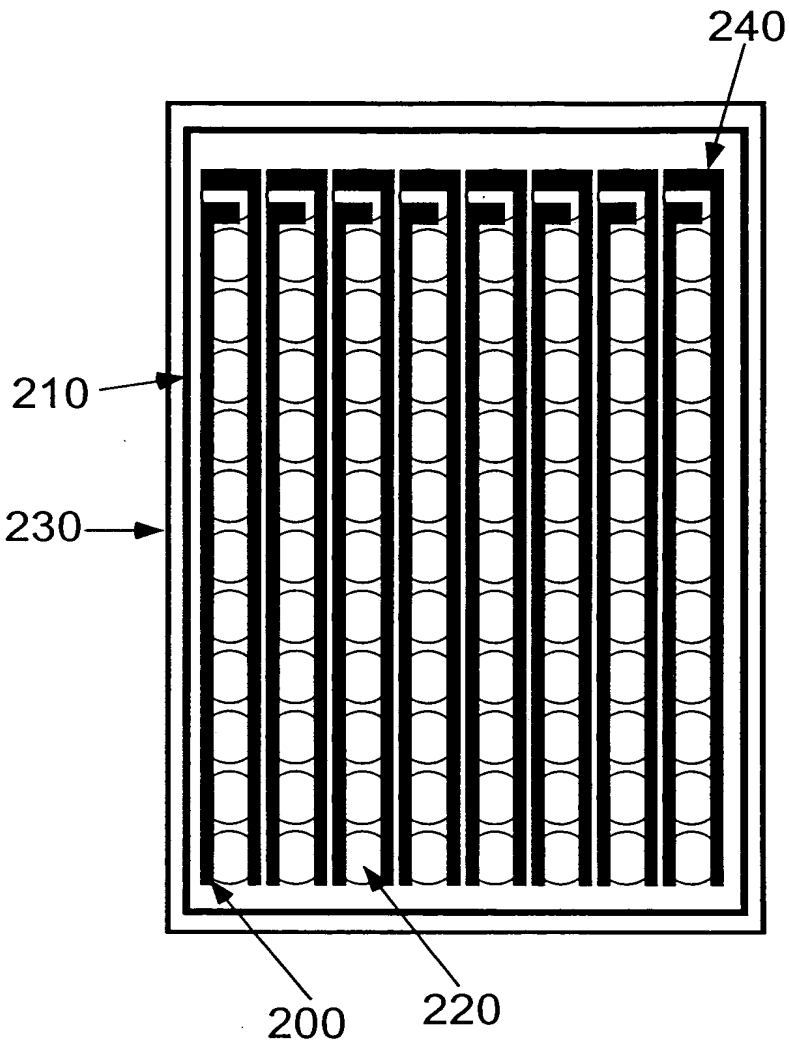


FIG. 2D

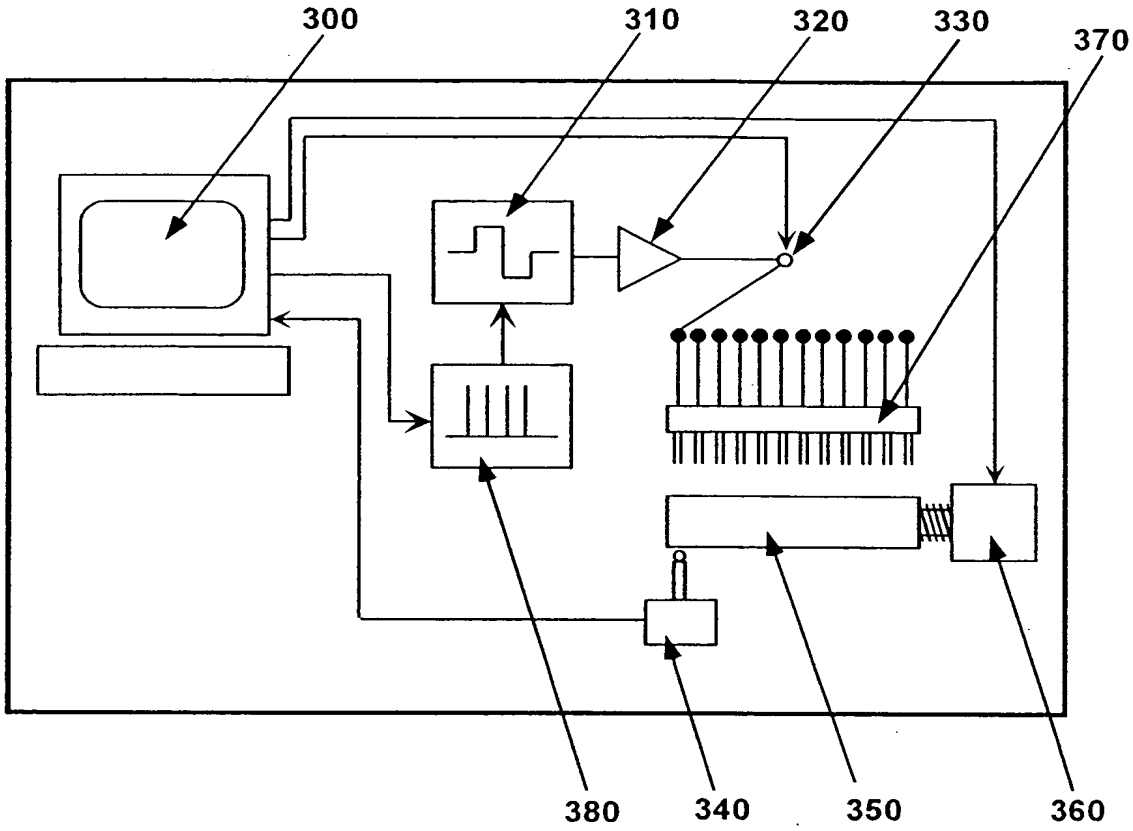


FIG. 3

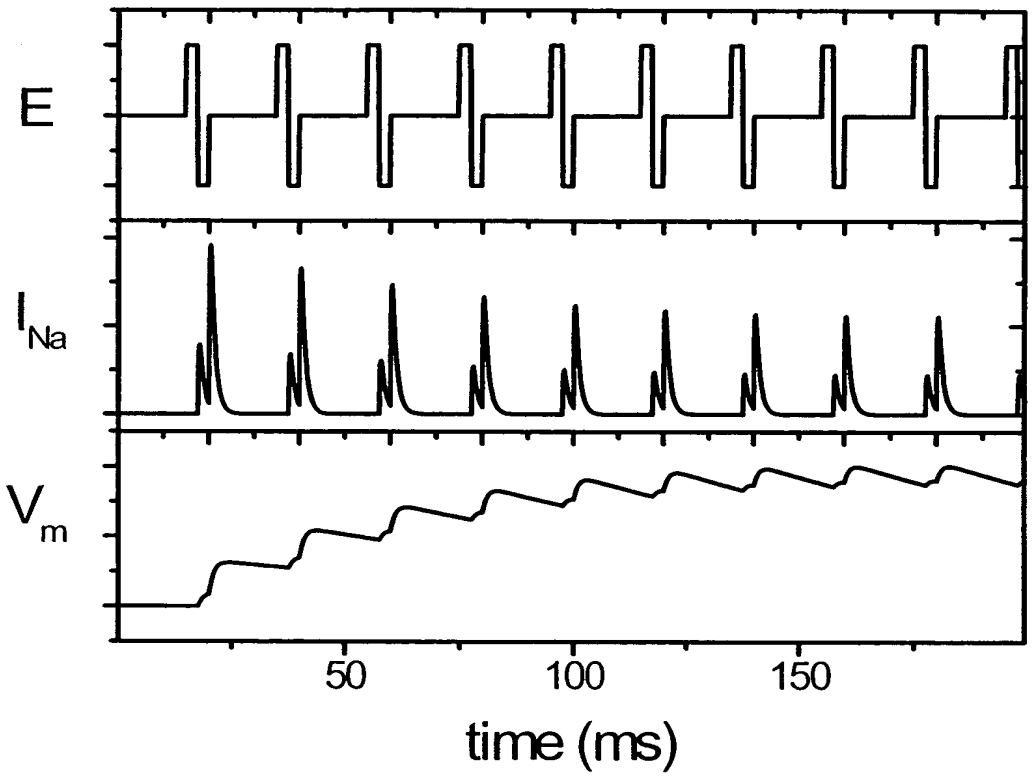


FIG. 4

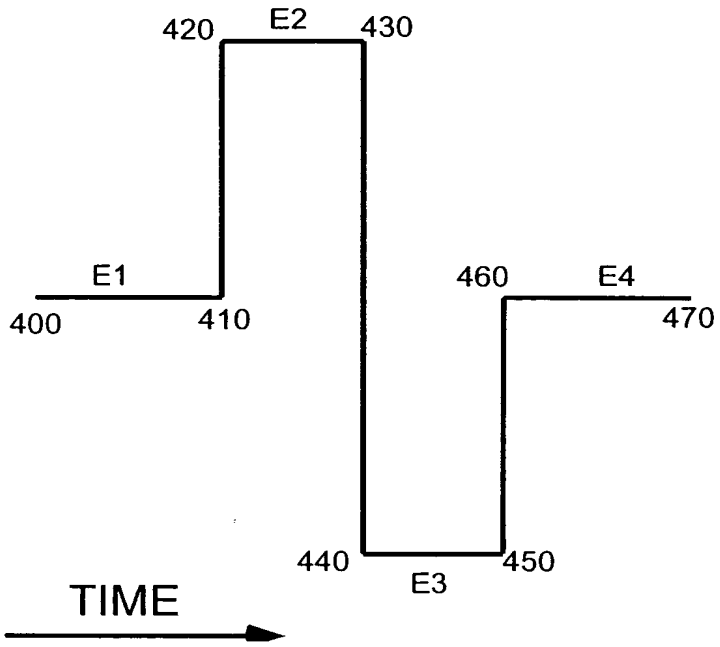


FIG. 5

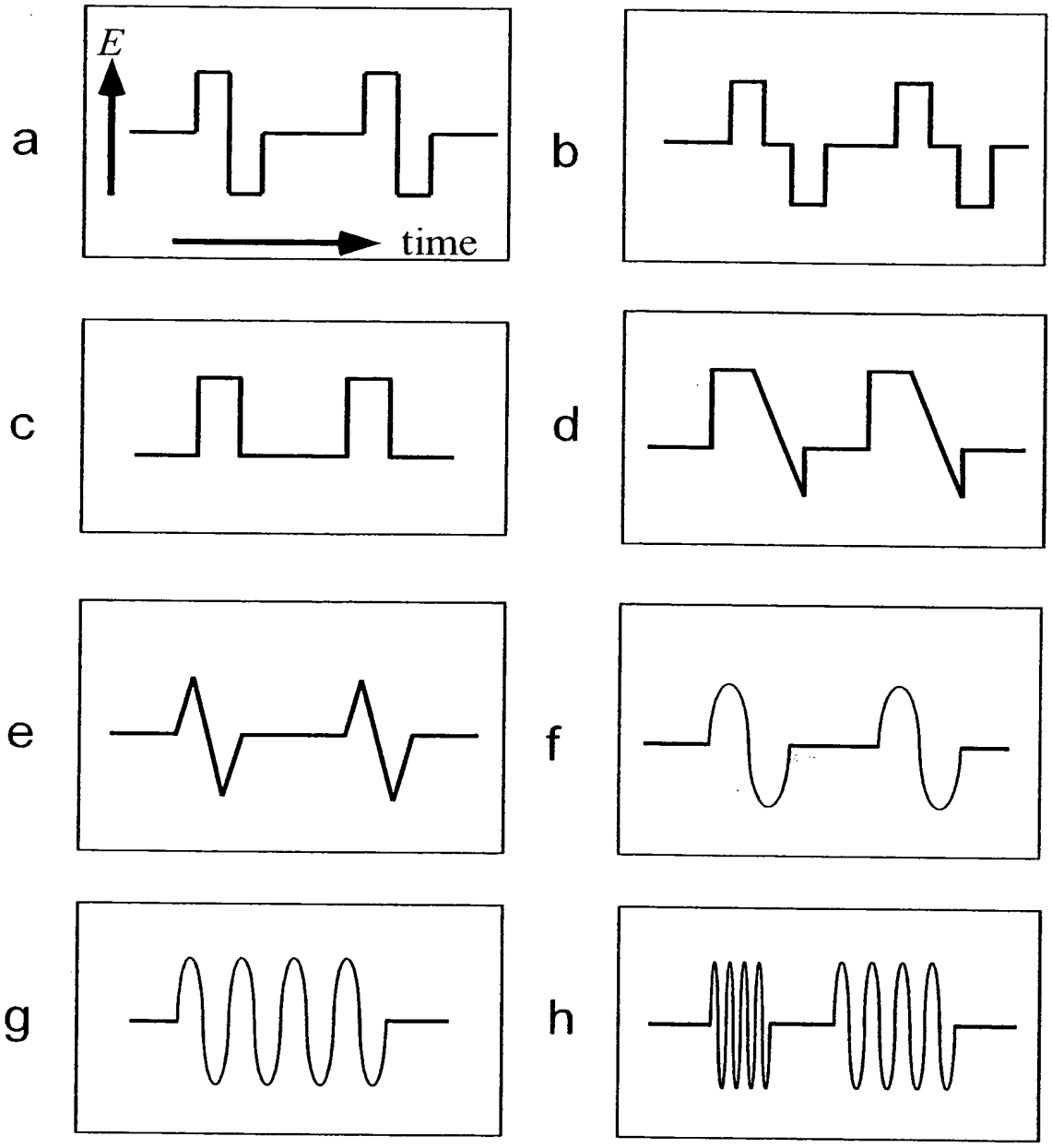


FIG. 6

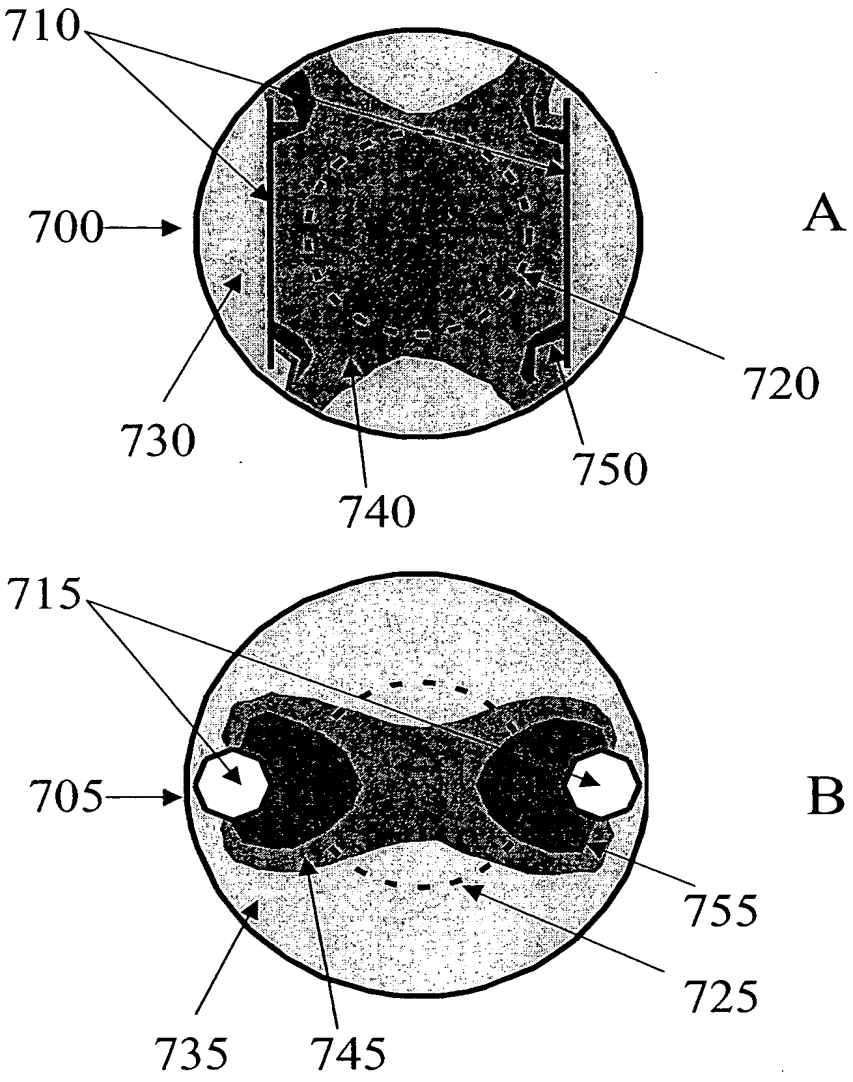


FIG. 7

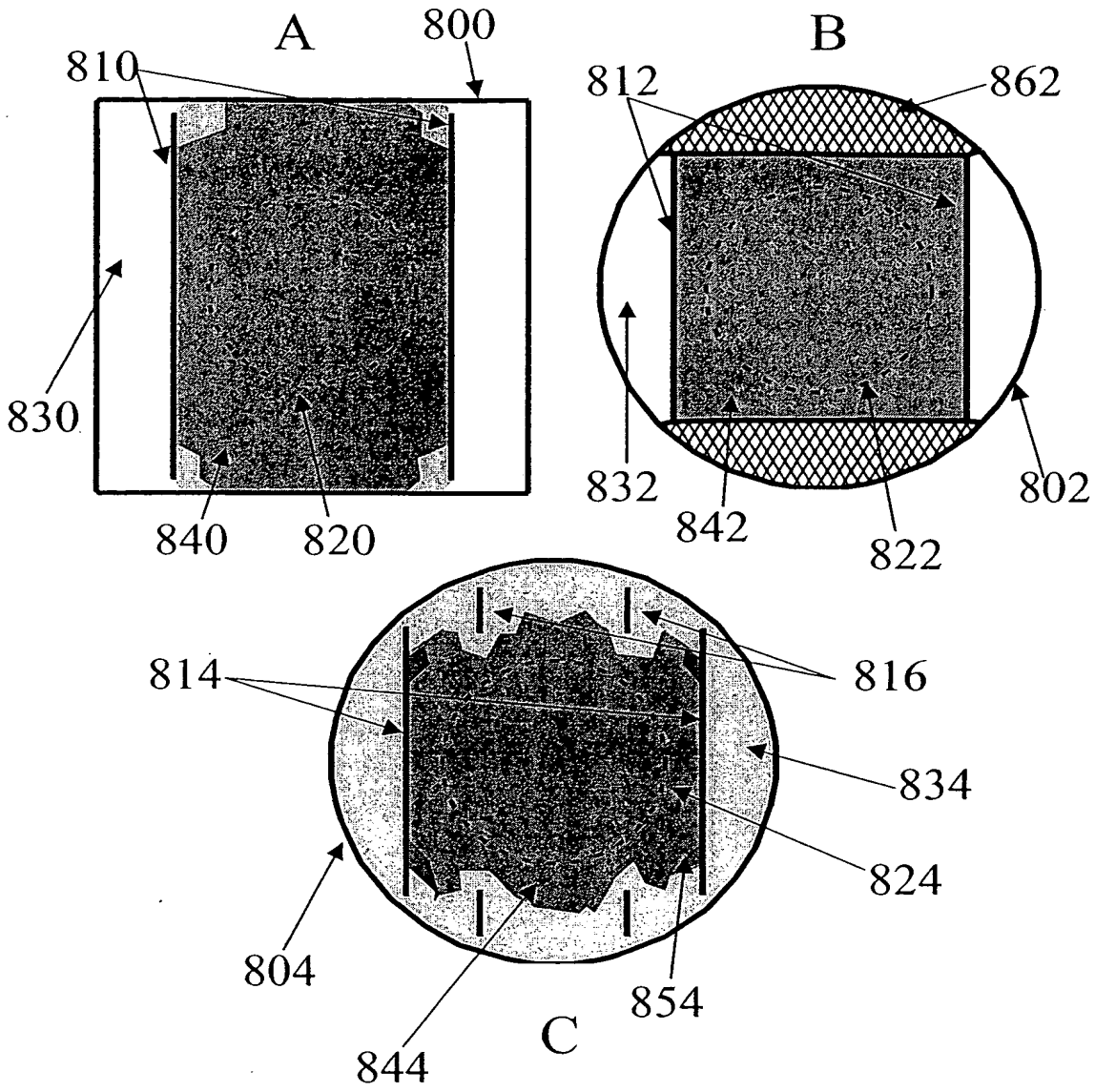

A
800
810
830
840
820
B
812
862
832
842
822
802
814
816
834
824
804
854
844
C

FIG. 8

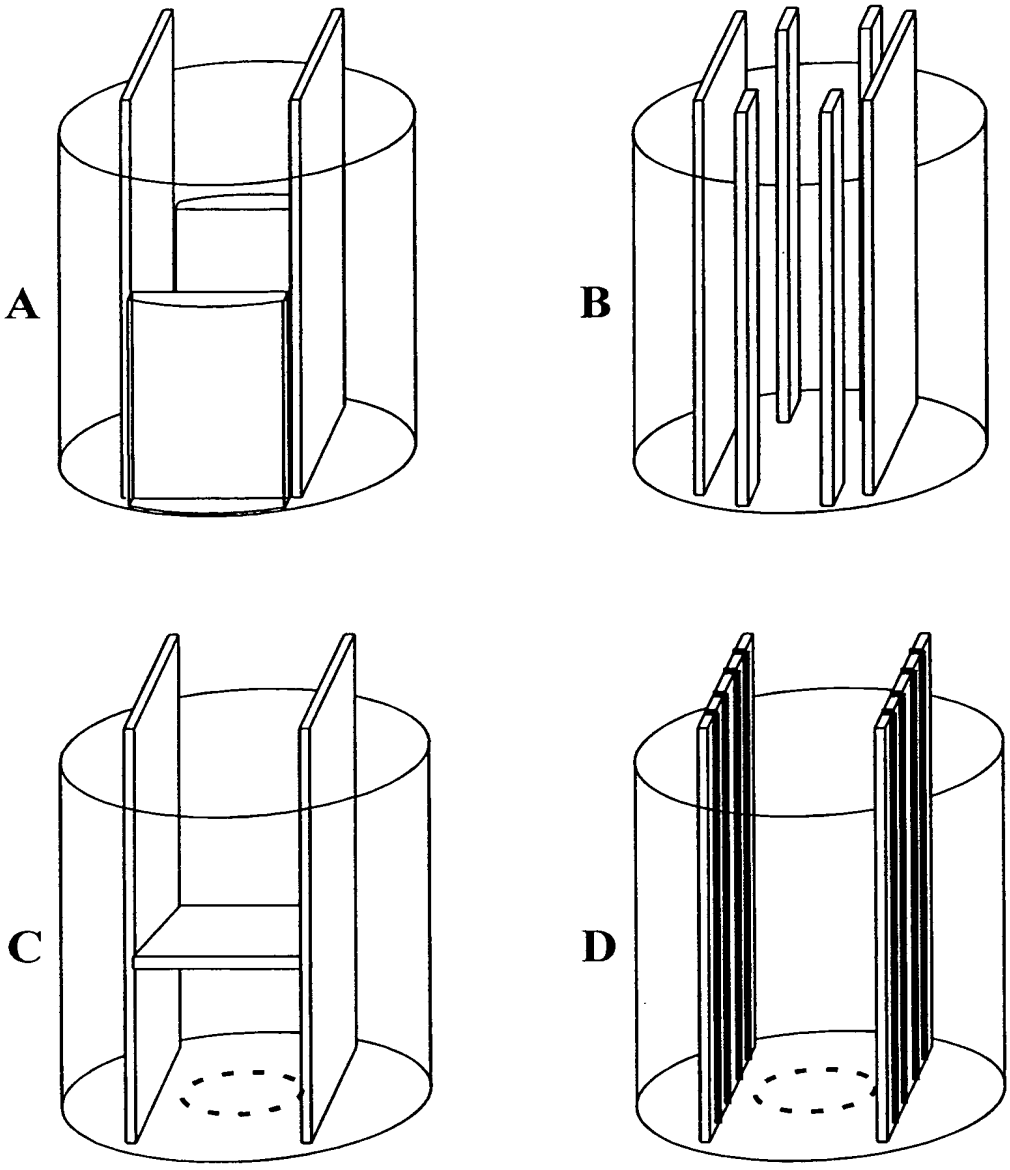


FIG. 9

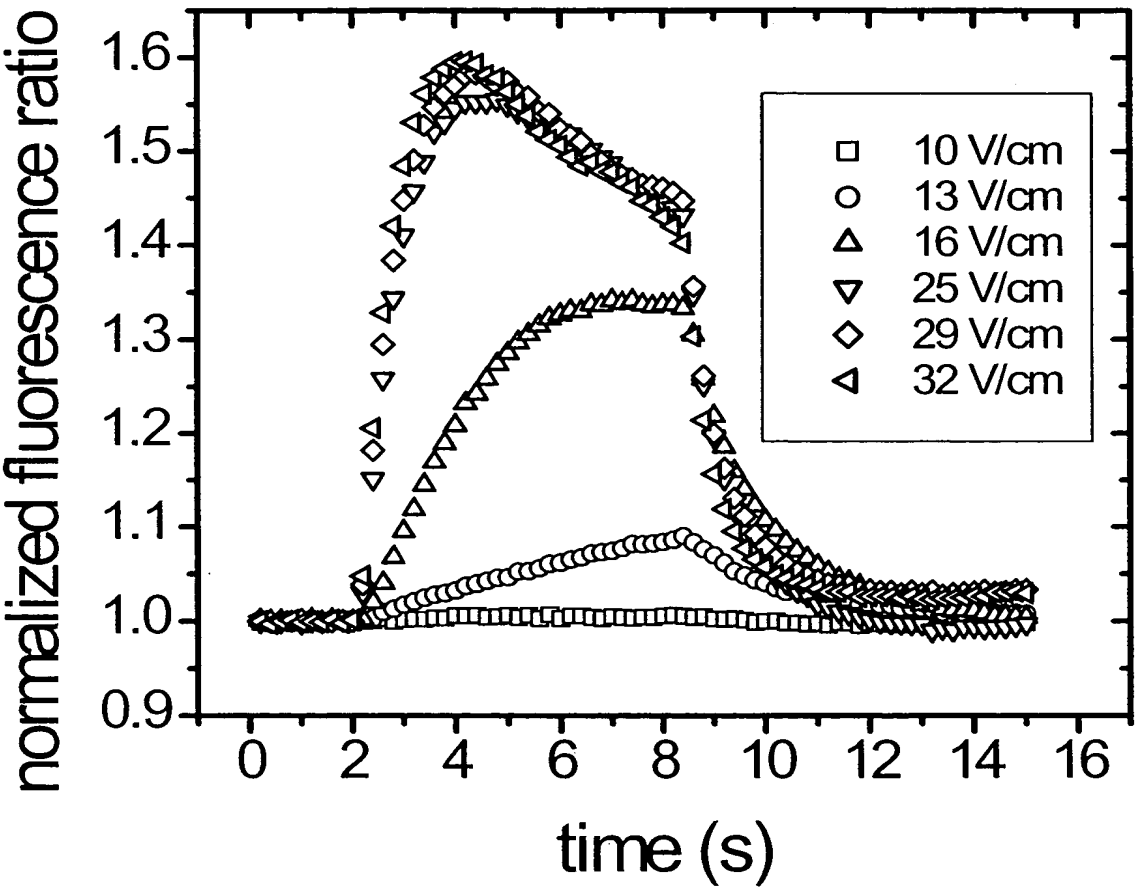

normalized fluorescence ratio
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0
2
4
6
8
10
12
14
16
time (s)
10 V/cm
13 V/cm
16 V/cm
25 V/cm
29 V/cm
32 V/cm

FIG. 10

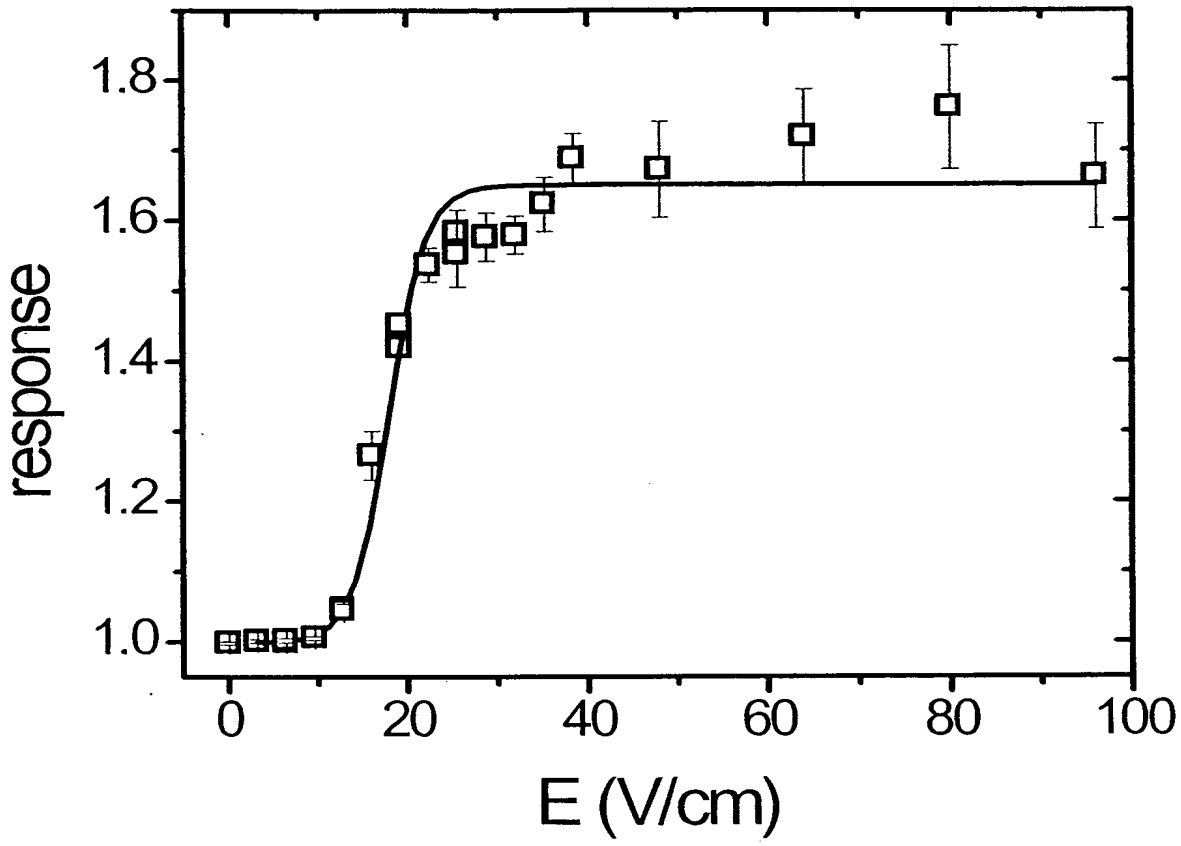


FIG. 11

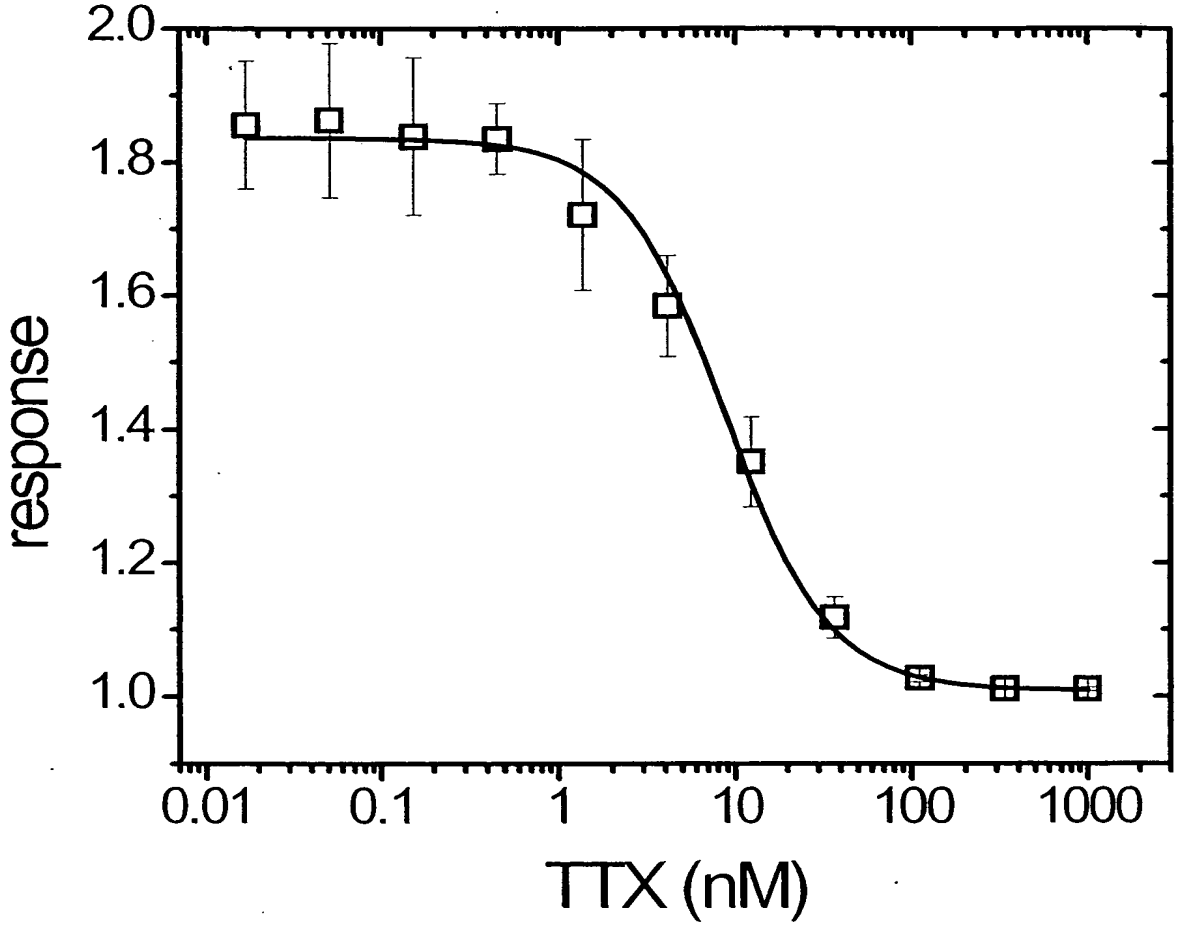


FIG. 12

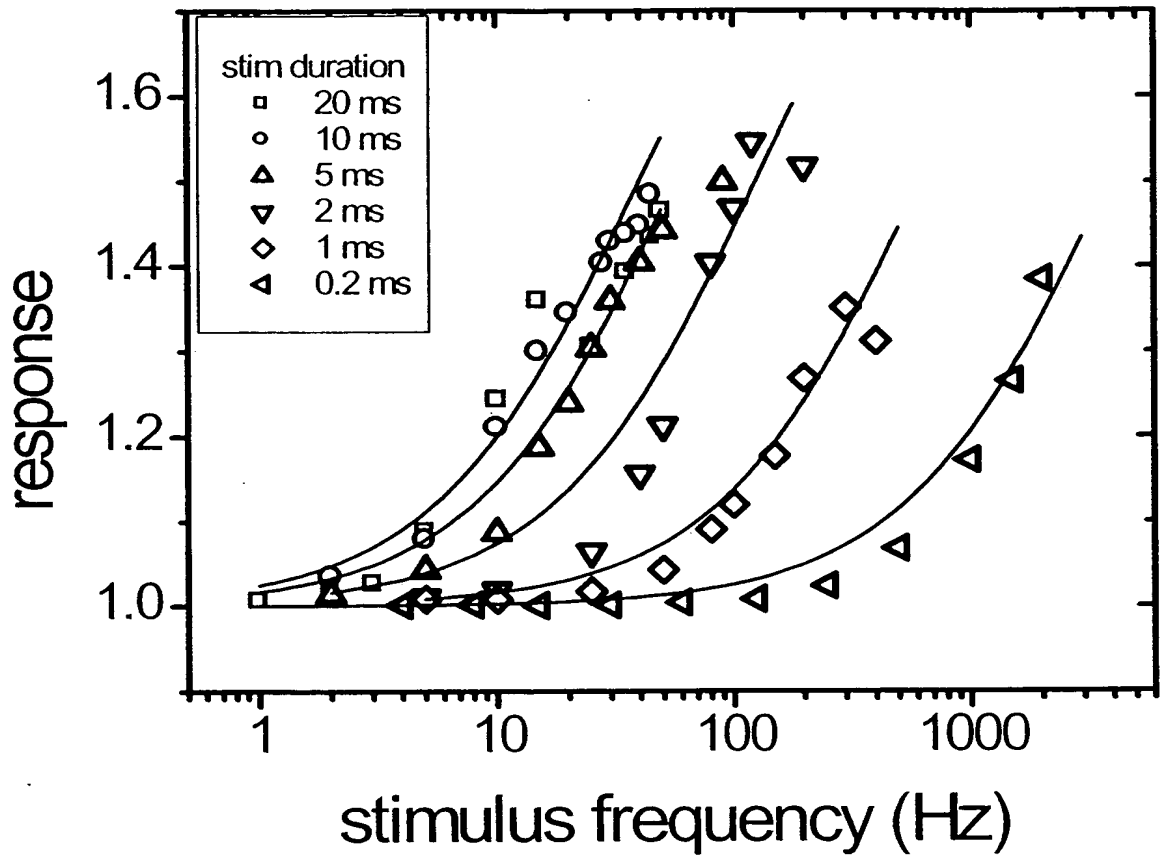

stim duration
20 ms
10 ms
5 ms
2 ms
1 ms
0.2 ms
response
1.6
1.4
1.2
1.0
1
10
100
1000
stimulus frequency (Hz)

FIG. 13

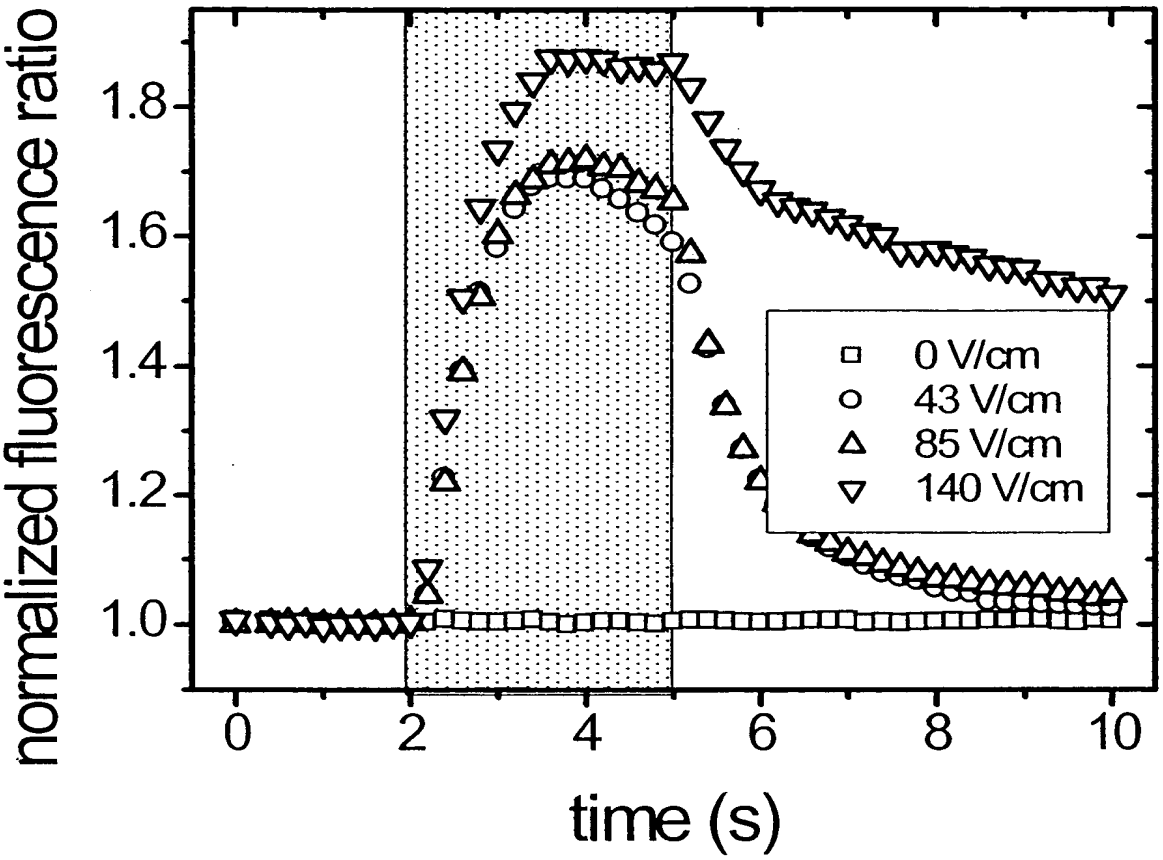

normalized fluorescence ratio
1.8
1.6
1.4
1.2
1.0
0
2
4
6
8
10
time (s)
0 V/cm
43 V/cm
85 V/cm
140 V/cm

FIG. 14

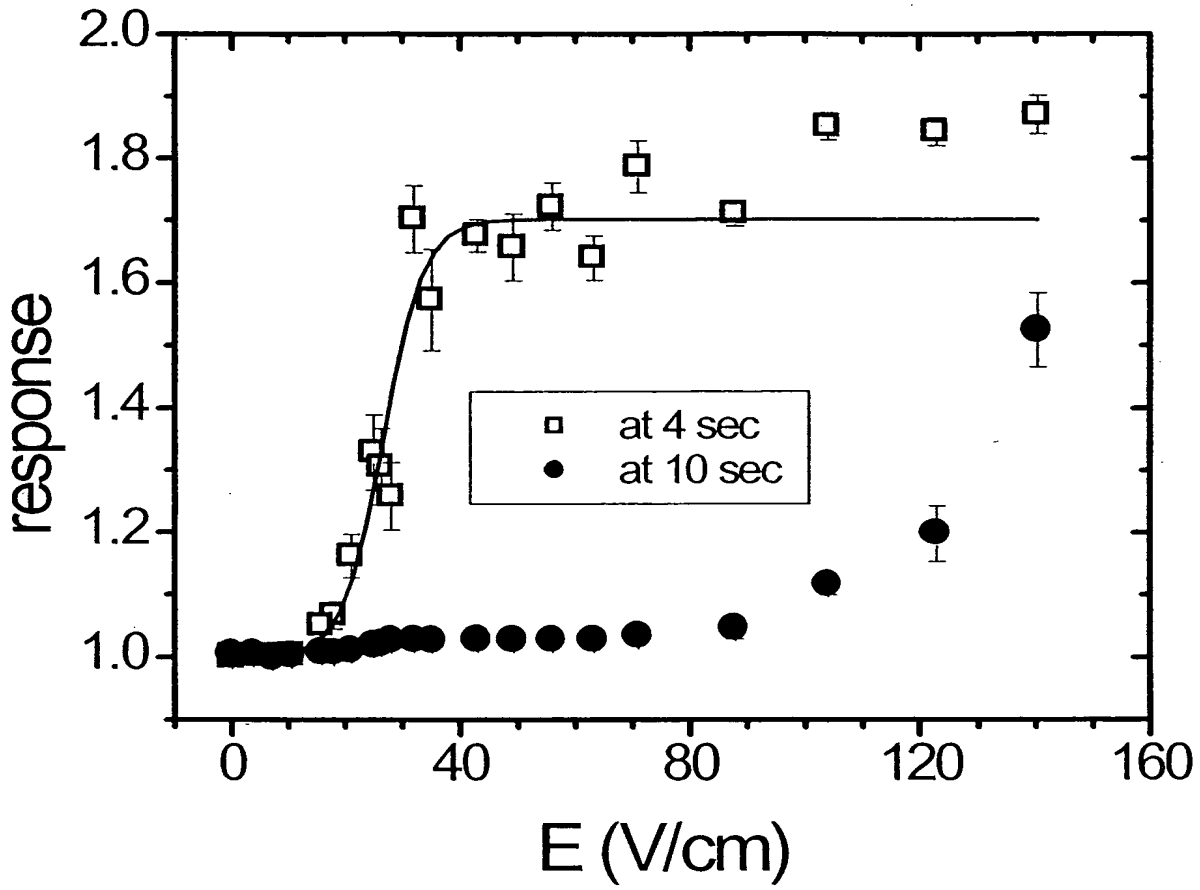


FIG. 15

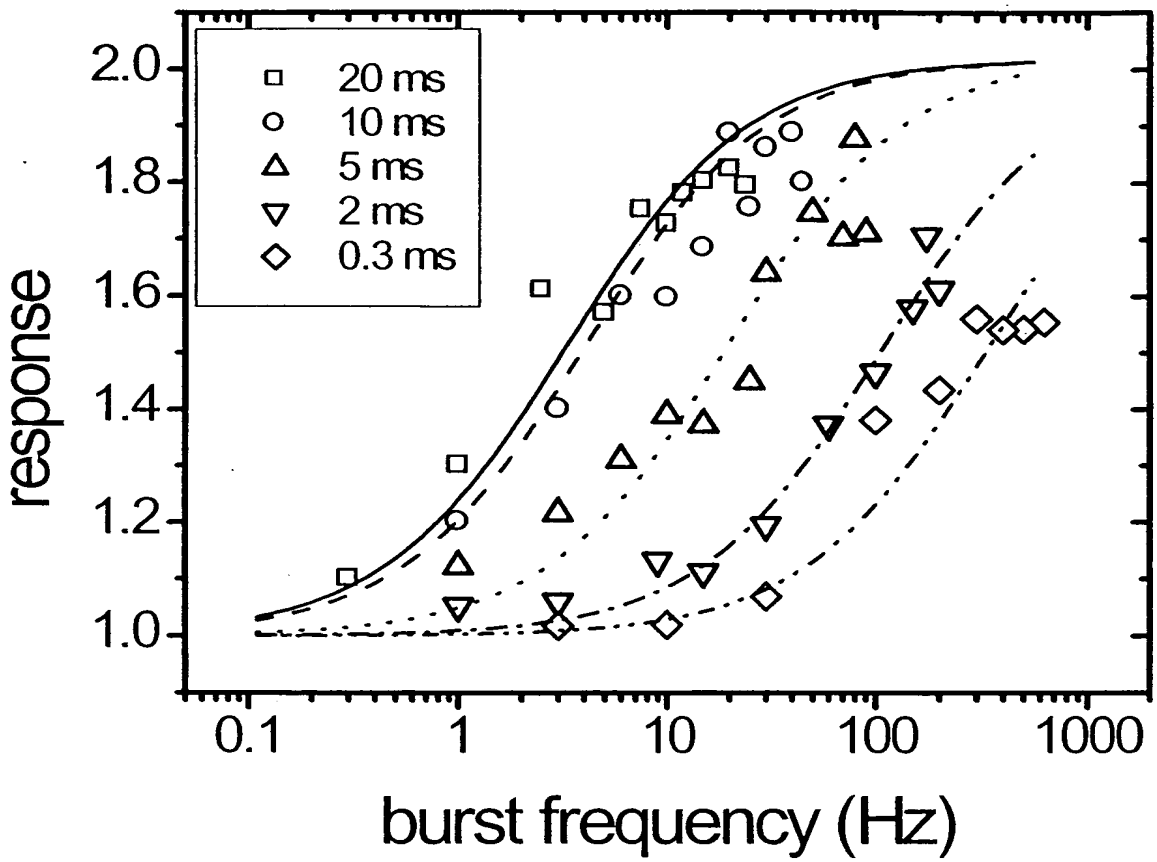

20 ms
10 ms
5 ms
2 ms
0.3 ms
response
2.0
1.8
1.6
1.4
1.2
1.0
0.1
1
10
100
1000
burst frequency (Hz)

FIG. 16

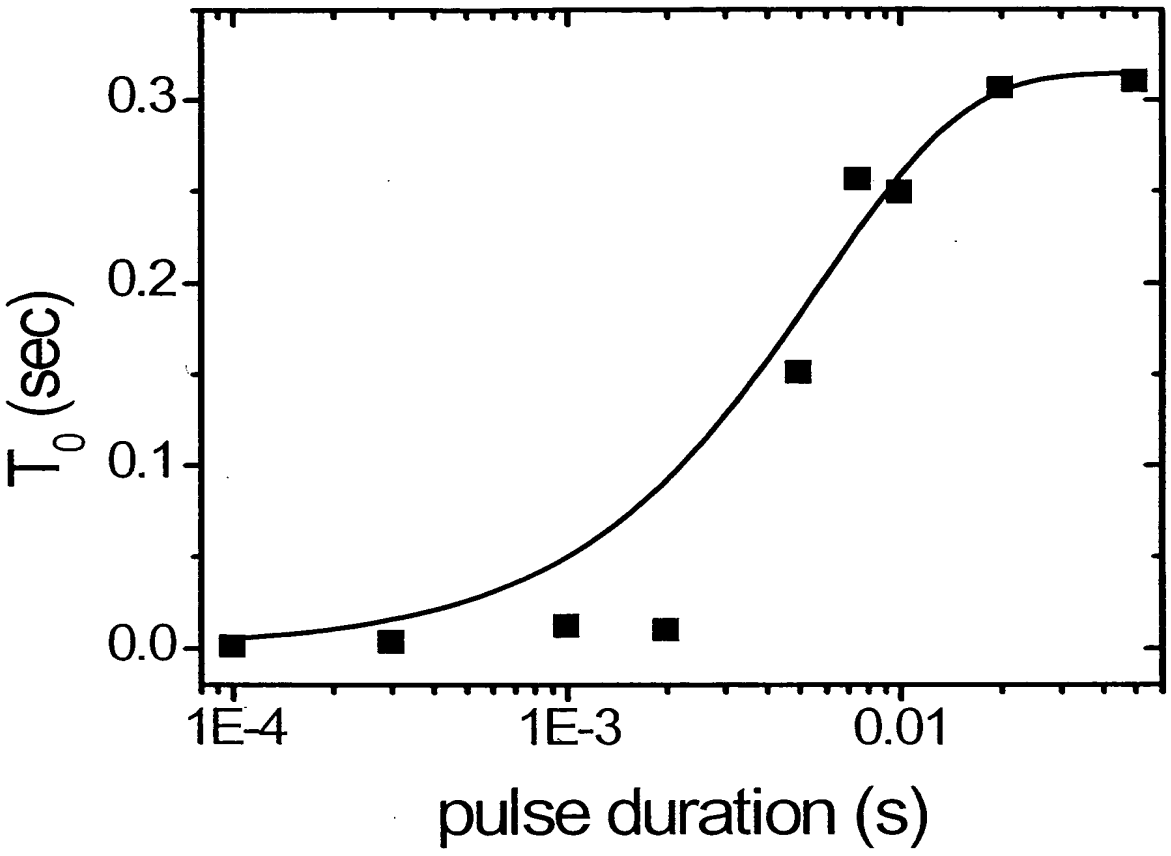


FIG. 17

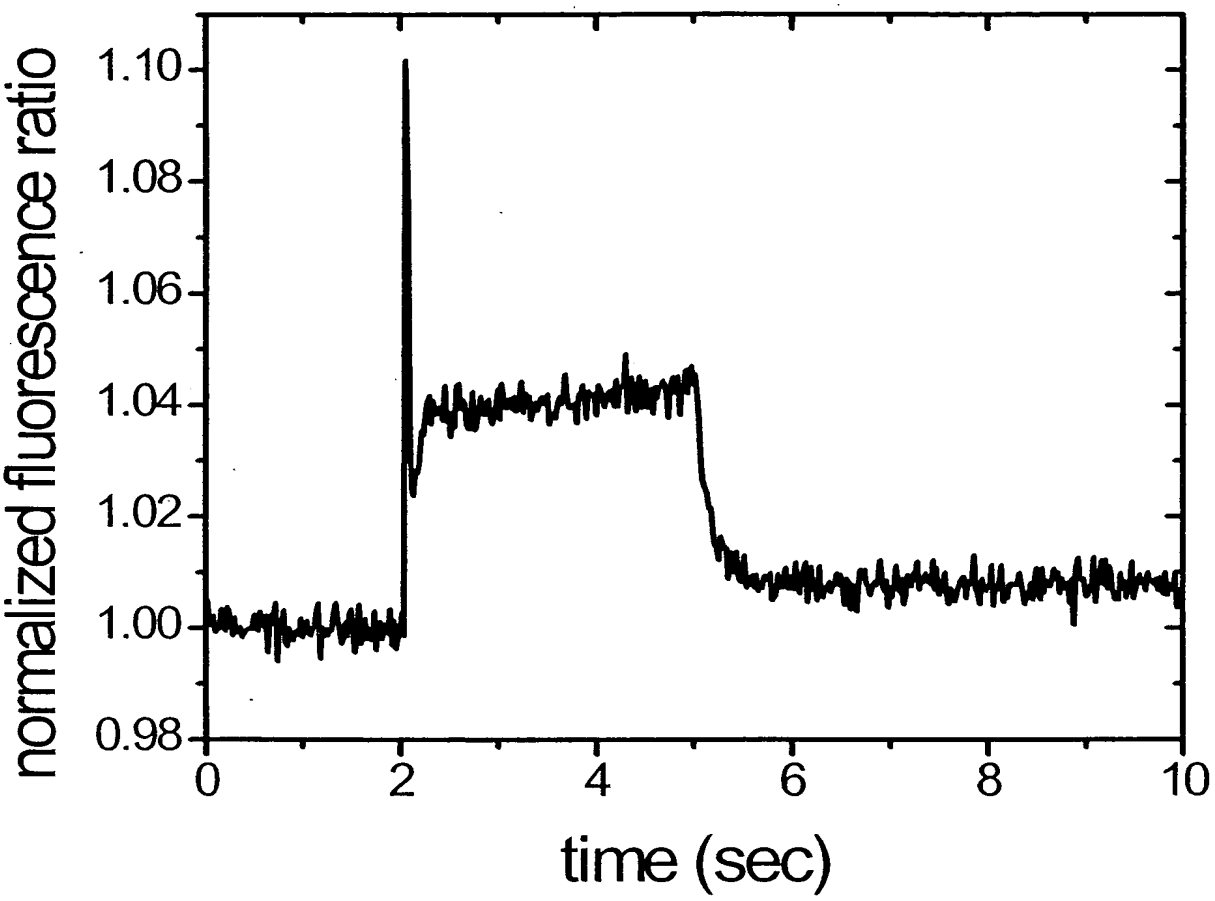

normalized fluorescence ratio
1.10
1.08
1.06
1.04
1.02
1.00
0.98
0
2
4
6
8
10
time (sec)

FIG. 18

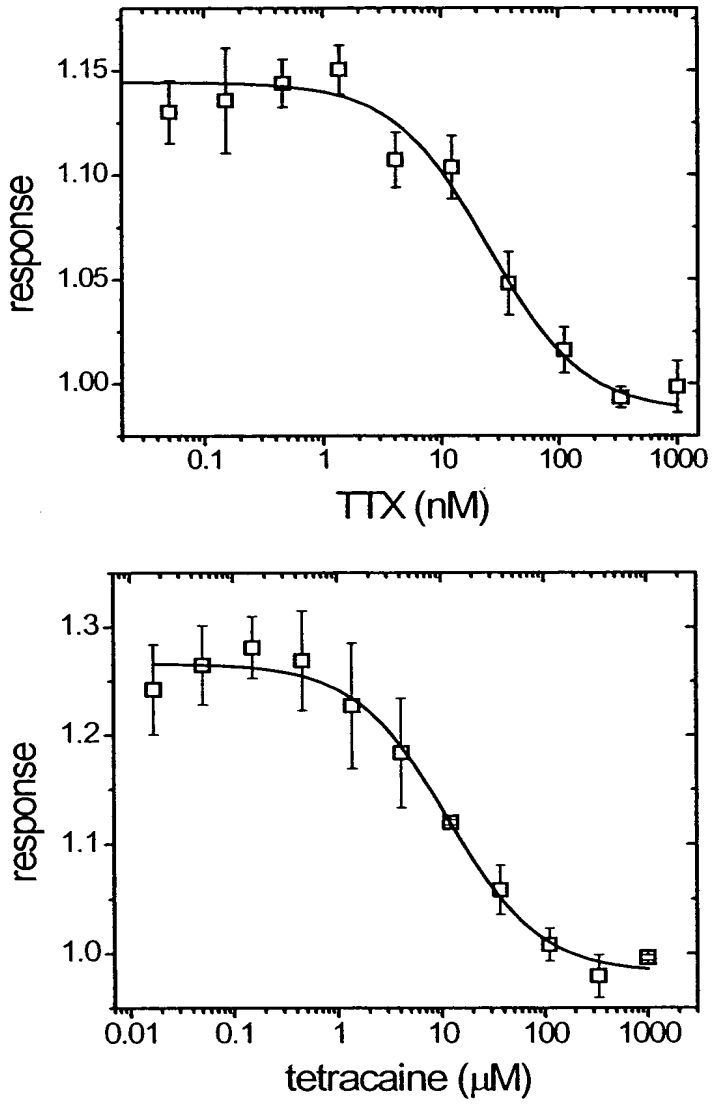

response
1.15
1.10
1.05
1.00
0.1
1
10
100
1000
TTX (nM)
response
1.3
1.2
1.1
1.0
0.01
0.1
1
10
100
1000
tetracaine (μM)

FIG. 19

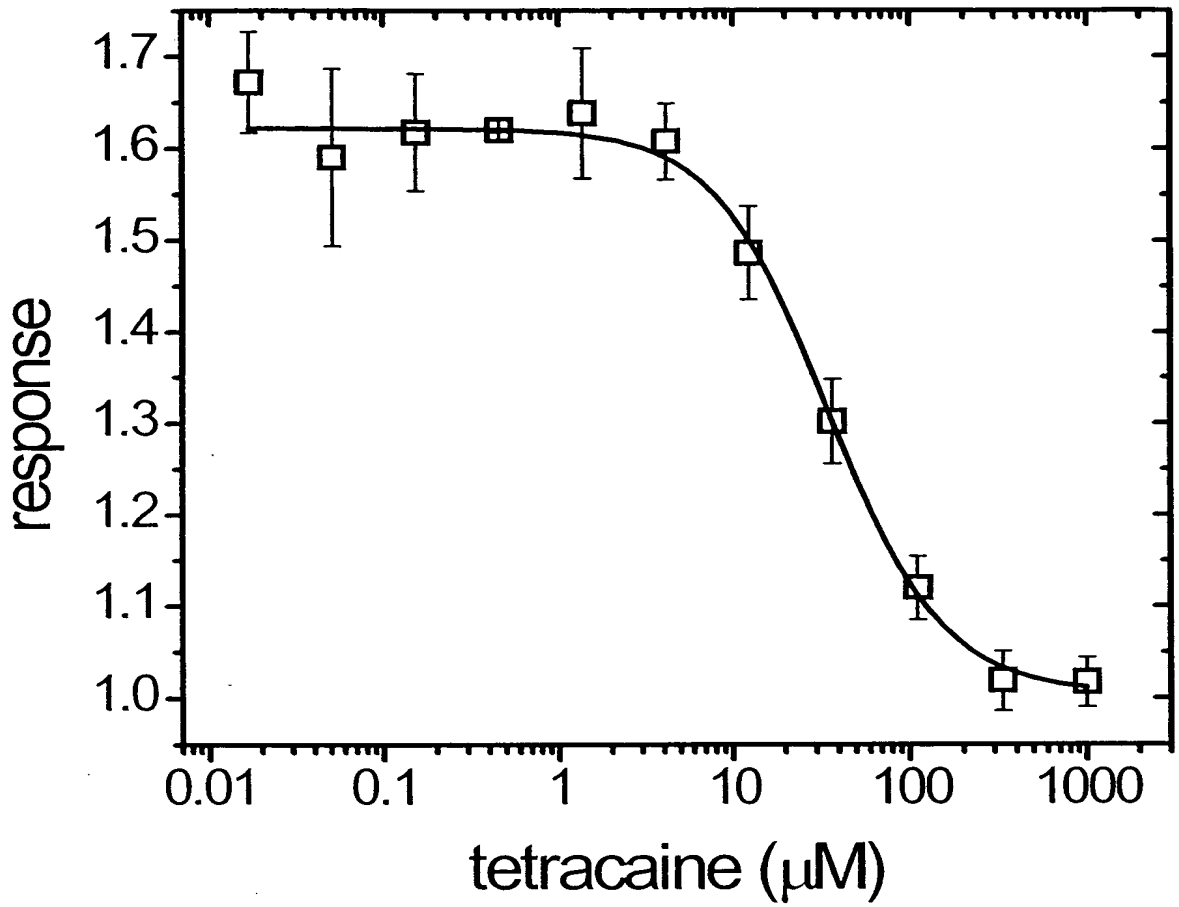

response
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.01
0.1
1
10
100
1000
tetracaine (μM)

FIG. 20

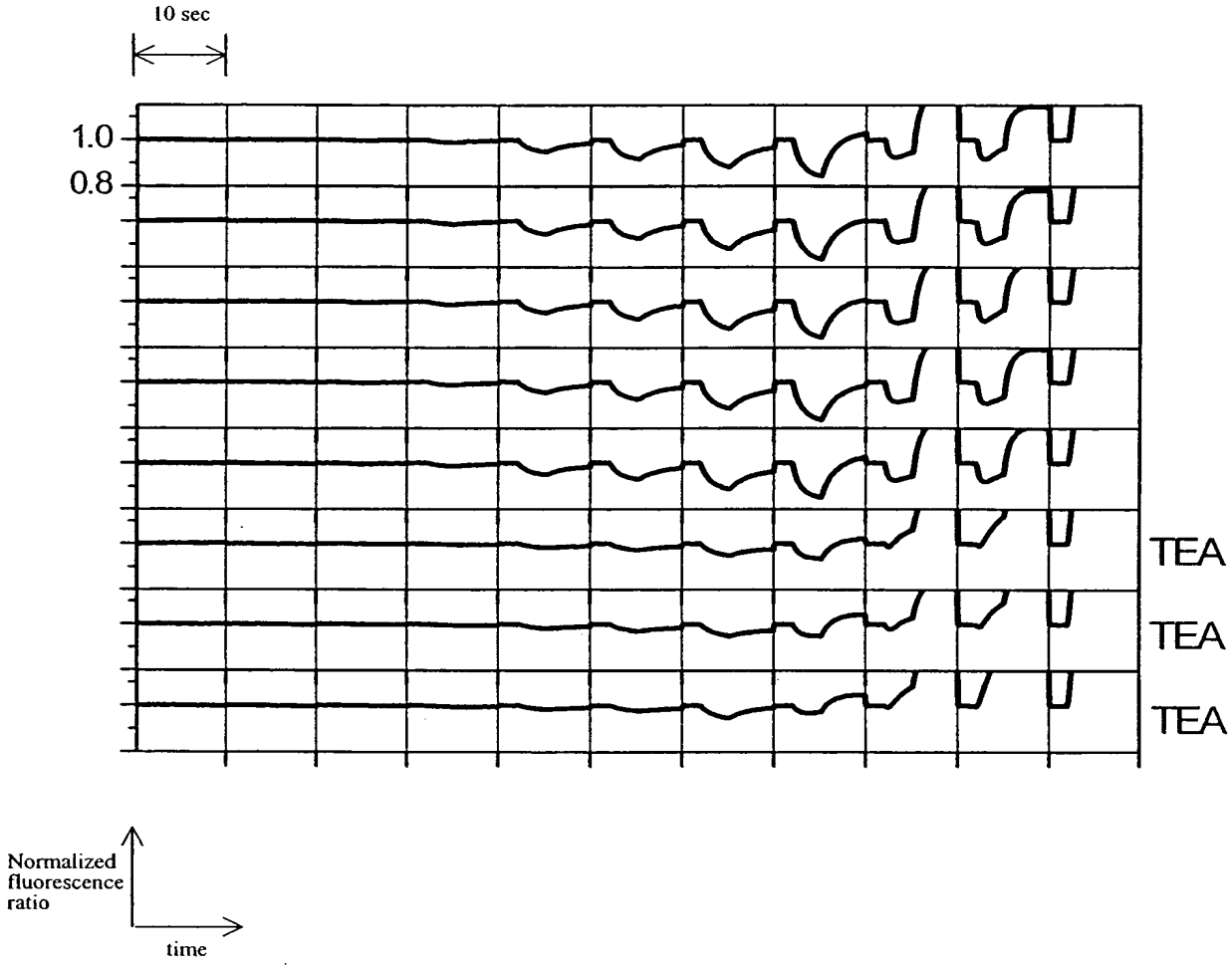


FIG. 21

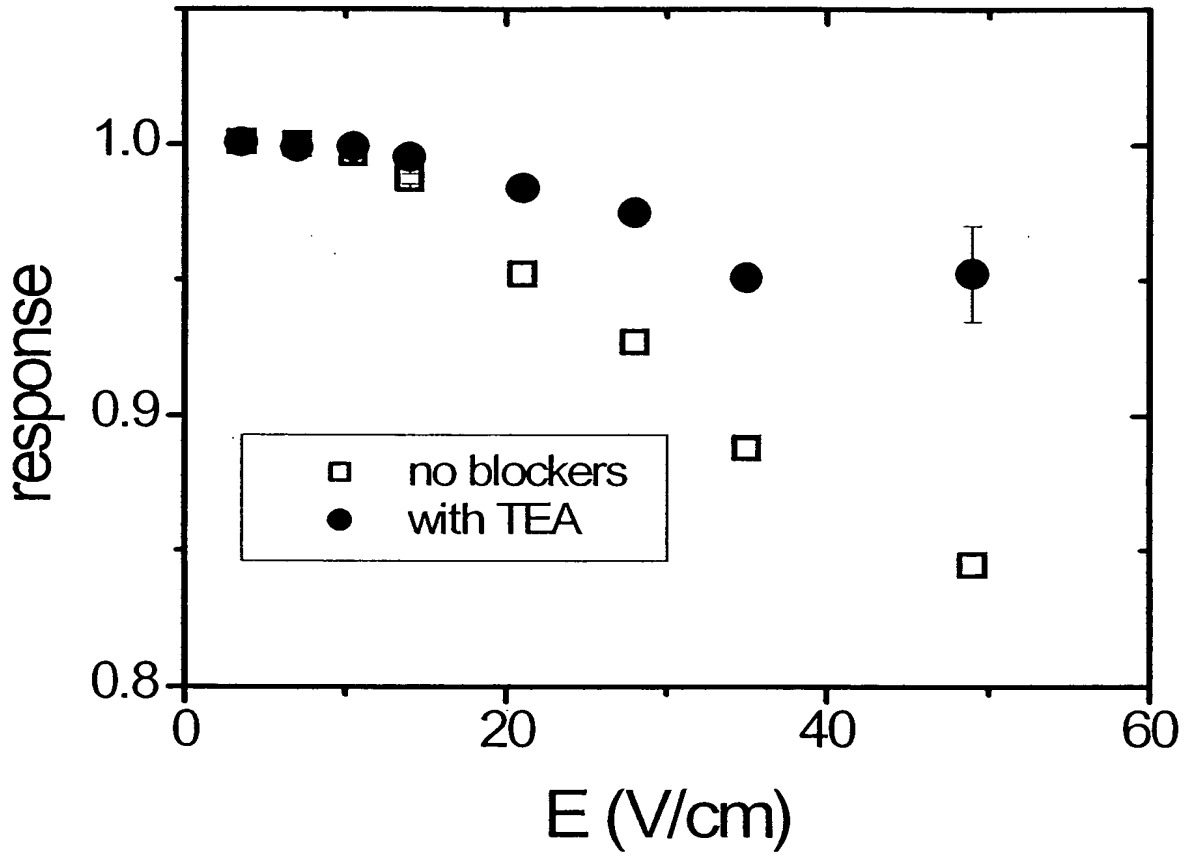


FIG. 22

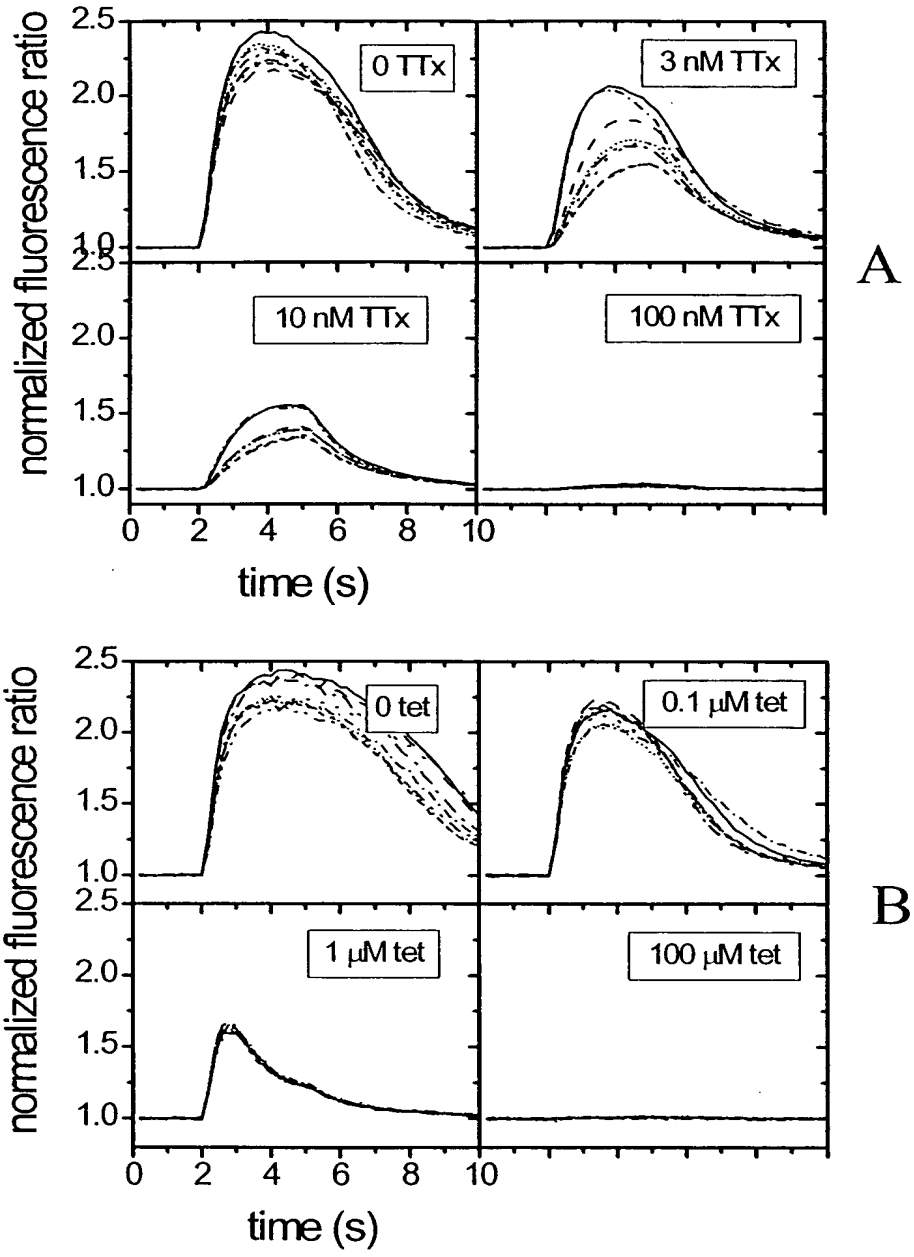
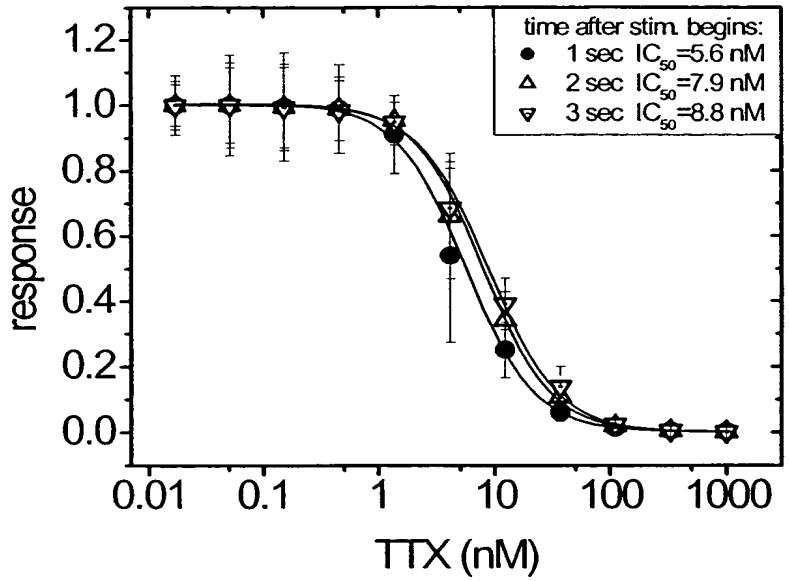
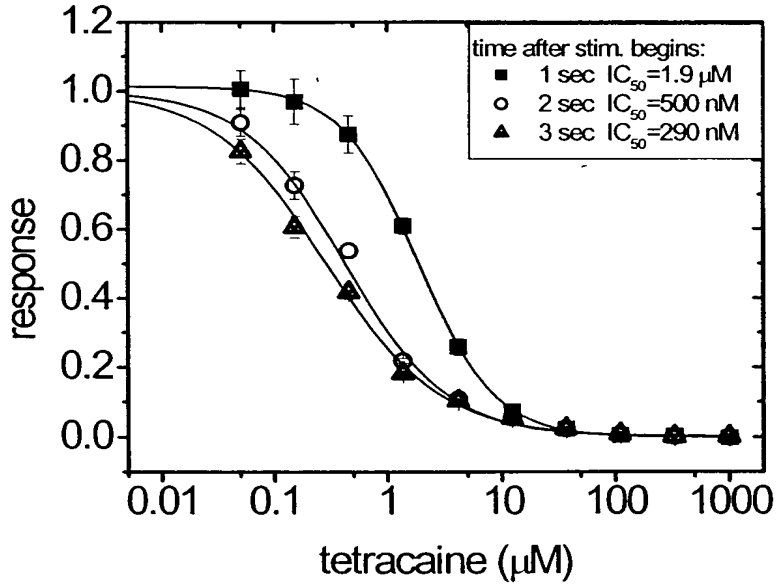

normalized fluorescence ratio
0 TTx
3 nM TTx
10 nM TTx
100 nM TTx
time (s)
A
normalized fluorescence ratio
0 tet
0.1 μM tet
1 μM tet
100 μM tet
time (s)
B

FIG. 23


time after stim. begins:
1 sec IC50=5.6 nM
2 sec IC50=7.9 nM
3 sec IC50=8.8 nM
response
TTX (nM)
0.01
0.1
1
10
100
1000
0.0
0.2
0.4
0.6
0.8
1.0
1.2

A


time after stim. begins:
1 sec IC50=1.9 μM
2 sec IC50=500 nM
3 sec IC50=290 nM
response
tetracaine (μM)
0.01
0.1
1
10
100
1000
0.0
0.2
0.4
0.6
0.8
1.0
1.2

B

FIG. 24

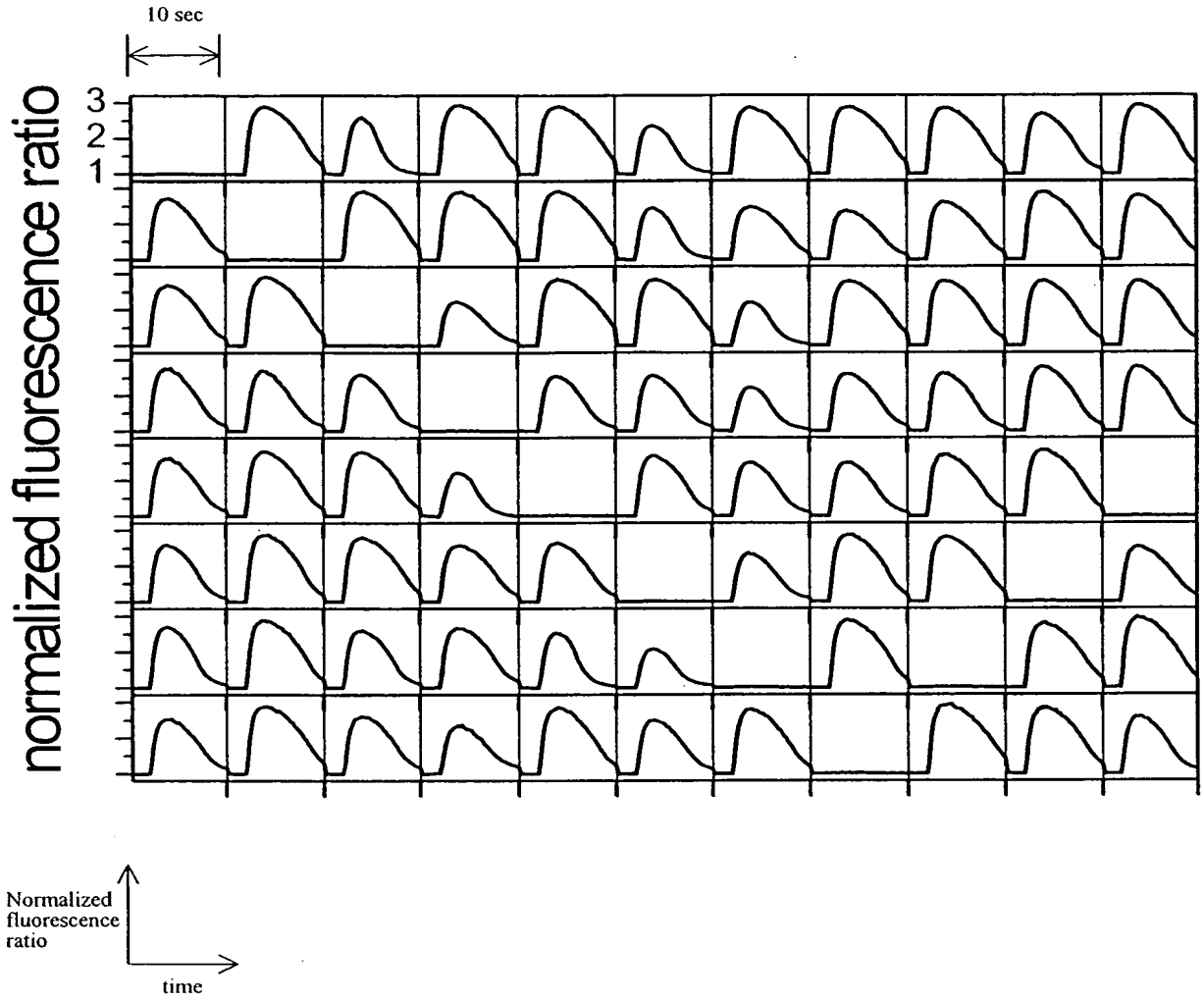

10 sec
normalized fluorescence ratio
3
2
1
Normalized fluorescence ratio
time

FIG. 25

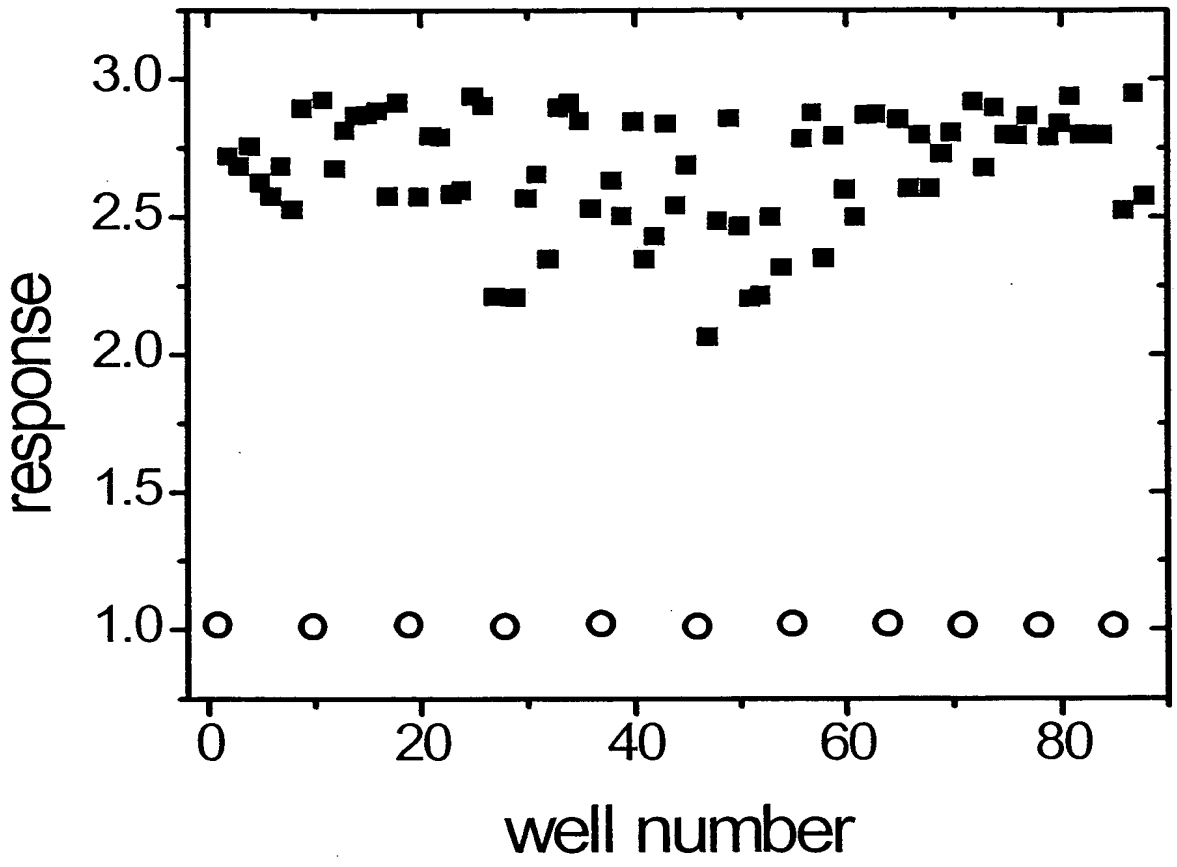


FIG. 26

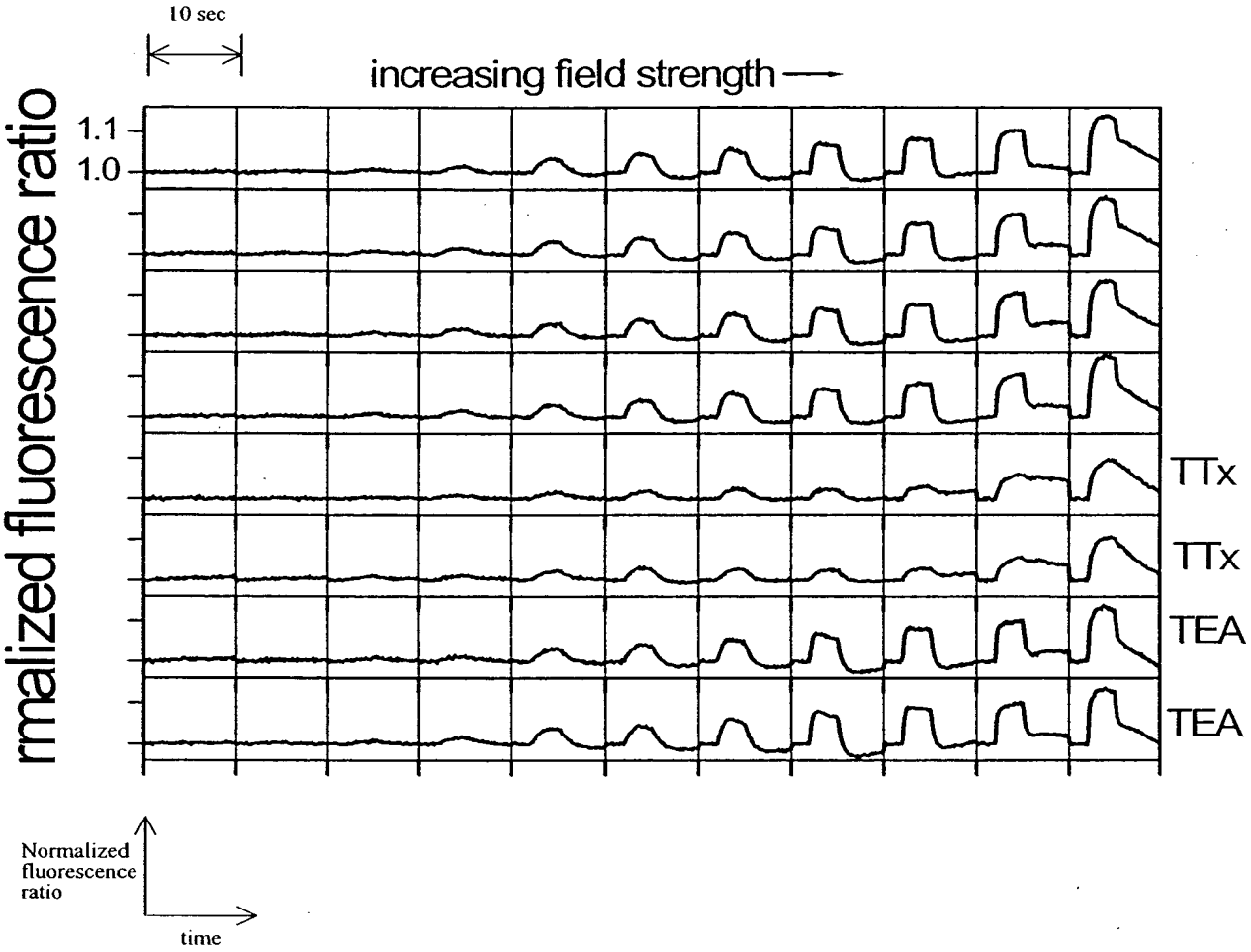

10 sec
increasing field strength
rmalized fluorescence ratio
1.1
1.0
TTx
TTx
TEA
TEA
Normalized fluorescence ratio
time

FIG. 27

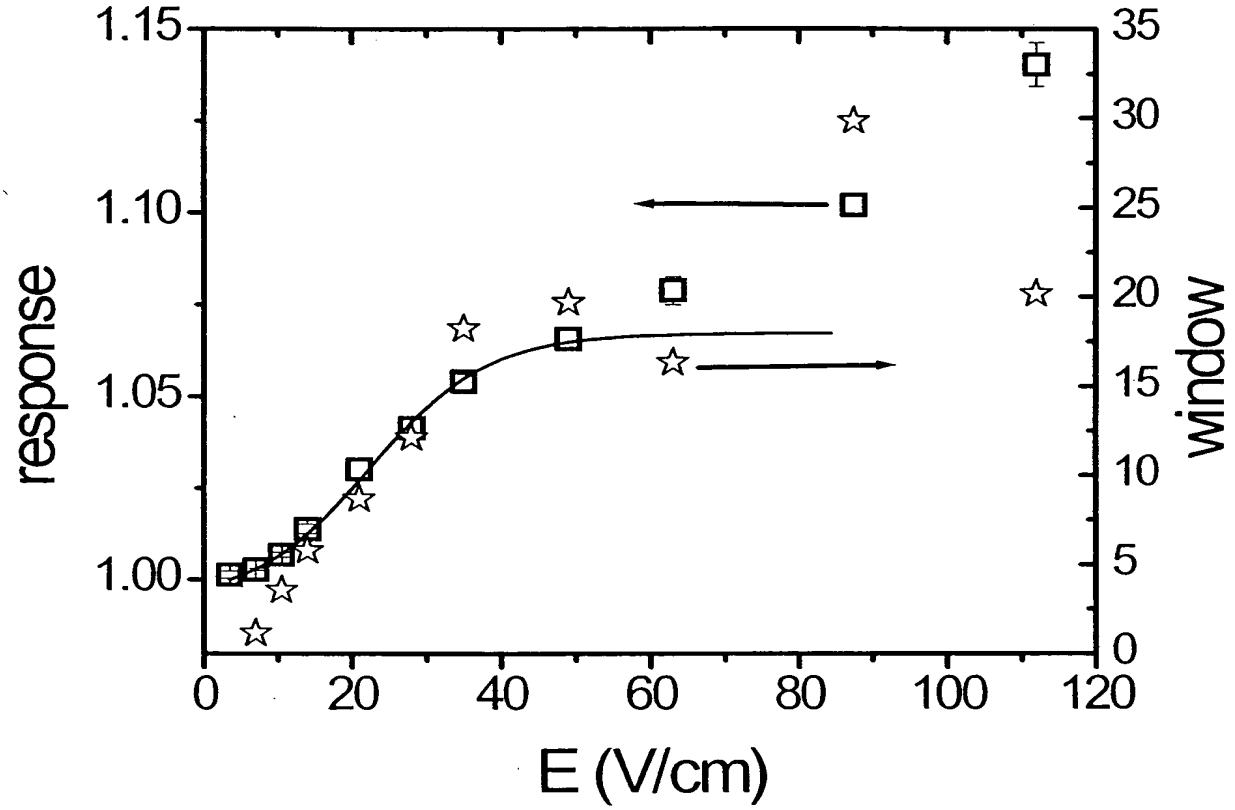

1.15
1.10
1.05
1.00
response
35
30
25
20
15
10
5
0
window
0
20
40
60
80
100
120
E (V/cm)

FIG. 28

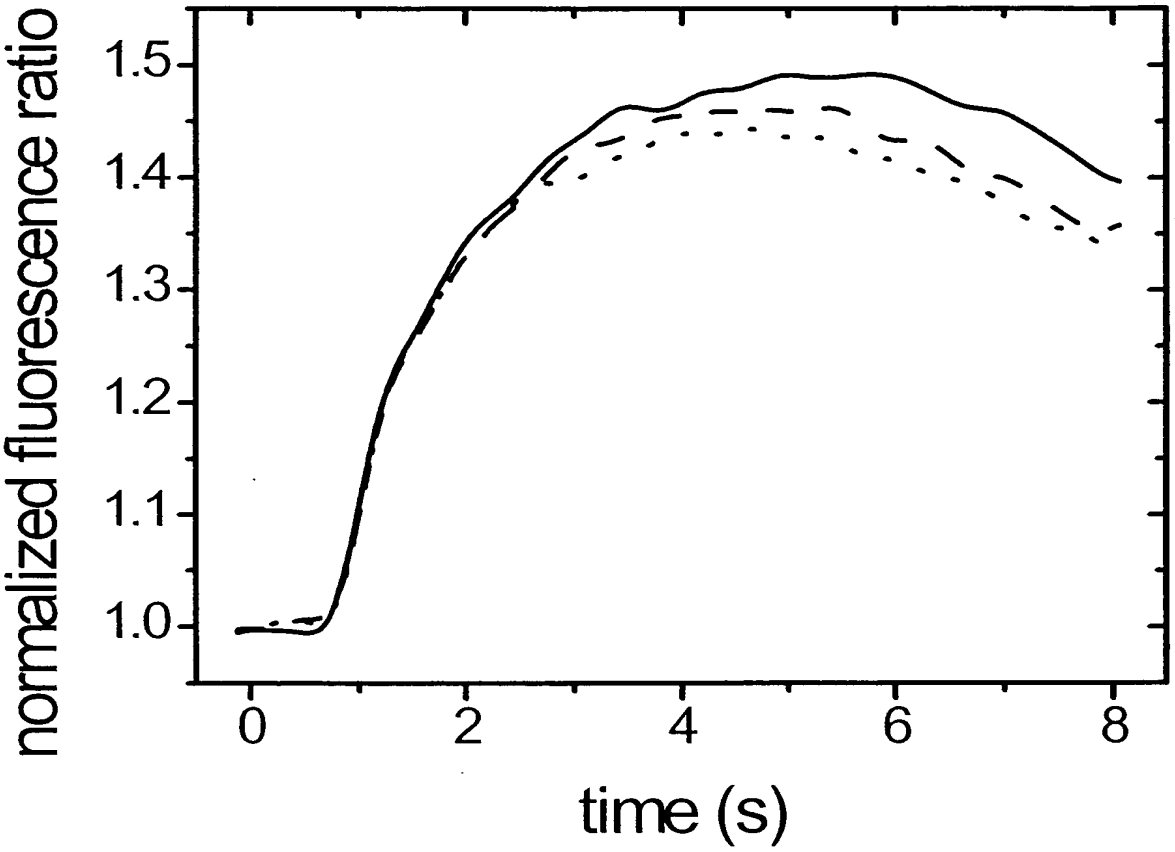


FIG. 29

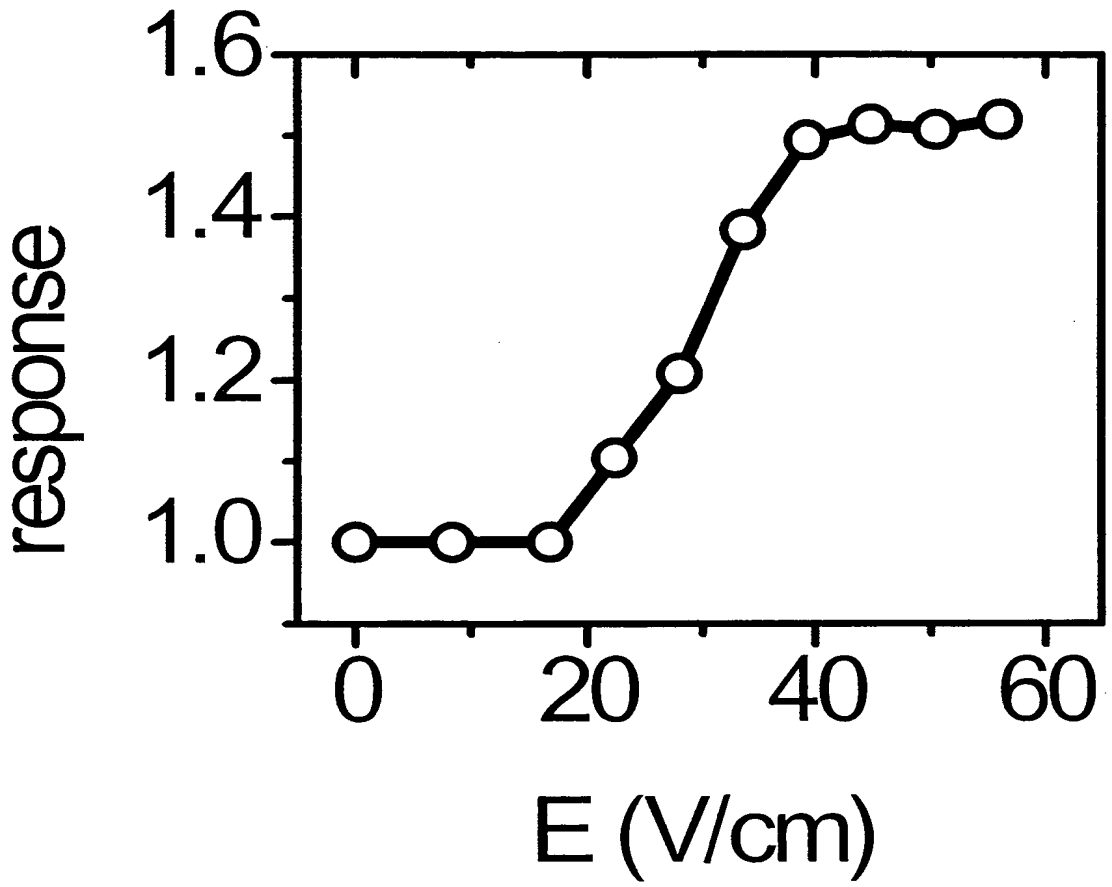


FIG. 30

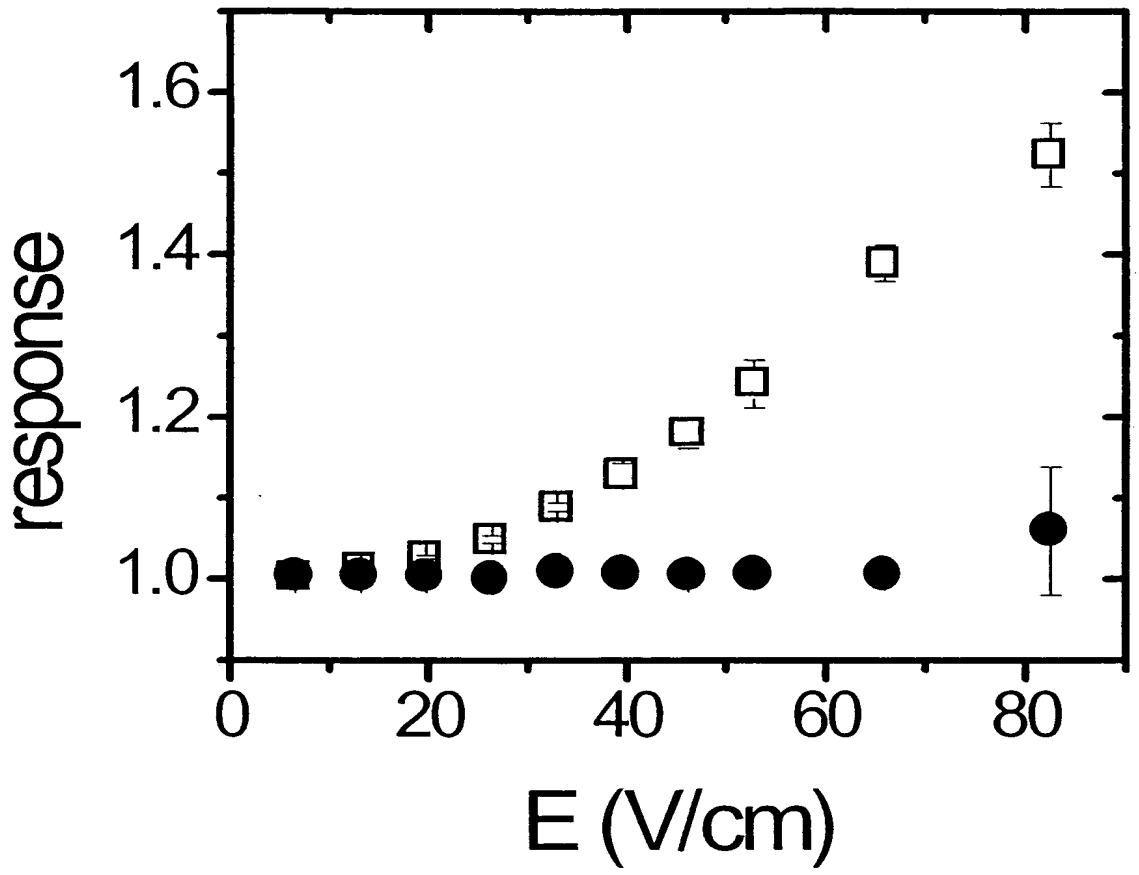


FIG. 31